

## **SIEC Briefing Paper SIEC Approval of Interoperability Plan for 700 MHz as part of the Regional Planning Committee (43) Report**

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### **Description**

The Public Safety Wireless Network (PSWN) introduced the concept of State Interoperability Executive Committees (SIEC) to this state. The Federal Communications Commission tasked SIECs throughout the United States with managing and administering both interoperability channels and state frequencies specifically within the 700 MHz spectrum. SIECs were in a unique position to know what would be in the best interests for state investments and had a regional overview of requirements for interoperability. As part of this requirement, when states applied for the licensing of 700 MHz managed by an SIEC, the Committee was required to submit a plan to the appropriate Regional Planning Committee designating the rules governing the use and sub-licensing of that frequency.

This work actually began with the first SIEC and much of the information in the plan came from a template. Region-43 asked the SIEC to modify several components of the plan that made the use of spectrum more efficient. These changes have been made, and vetted through the SIEC Advisory Working Group.

### **Recommendations to the Committee**

Staff recommends adoption of Section 6 of the plan as written. This Section was vetted thoroughly through the Regional Planning process of Region-43 and contents were reviewed and accepted by the SIEC Advisory Working Group.

### **Status**

Once approved, this work will become section 6 of the Region-43 planning document. (A complete copy of the *DRAFT Regional Plan for Public Safety 700 MHz Band in Region 43 (Washington)* is included with this briefing.

### **Issues**

All salient issues have been vetted and approved by both the Regional Planning Committee (RPC) and the SIEC Advisory Work Group. The RPC is planning to submit their completed plan within the next month or so, without the SIEC approval of this section, the RPC will be required to delay their filing.

### **Background**

In 1998, the FCC adopted service rules for the 24 MHz of spectrum in the 764-776/794-806 MHz frequency bands (collectively, the 700 MHz band). This spectrum was to be reallocated from television broadcasters at the direction of Congress by December 31, 2006; however, the date became flexible based upon market saturation of high definition television.

Of the 24 MHz of spectrum made available by Congress, 53 percent of this spectrum (12.5 MHz) is designated for general use by local, regional and state public safety agencies. In Washington State this spectrum would be managed by the Regional Planning Committee (of Region 43) chaired by Kevin Kearns of King County. The Vice Chair is Clark Palmer employed by the Washington State Patrol. With this additional spectrum came the responsibility of encouraging a broad participation in the planning and use of this spectrum. In particular the FCC encouraged participation by "Native American tribes."

Each state was encouraged to create a State Interoperability Executive Committee (SIEC) to administer/manage 2.6 MHz of spectrum in the 700 MHz band. If a state did create an SIEC, it could manage on behalf of the state, the spectrum that each state could license for both interoperability and for state use. Governor Locke made application for the 2.6 MHz of spectrum, and in the license application, advised that the SIEC would manage that spectrum for the people of this state.

Each region was required to submit a plan to the FCC advising how they would manage this new spectrum. In Washington State, the SIEC was required to submit a plan to be incorporated into the Region 43 Plan on how we proposed to manage the interoperability and state frequencies.

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## Regional Plan for the Public Safety 700 MHz Band in Region 43 (Washington)

[www.region43.org](http://www.region43.org)

**Draft** Version 6  
February 22, 2004

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## Plan Drafting Versions

<b>Draft Version</b>	<b>Date</b>	<b>General Description of Content</b>
1	01/26/03	This was the first drafting version and basically was just a cut-and-paste from the NPSTC Regional Planning Guidebook with some local information added. No frequency database information was included in the plan.
2	03/26/03	This version started to incorporate more specific local condition information and recommended policy approaches. It still did not include any pre-coordination database information.
3	04/30/03	This version has all the major framing points included in the document with the exception of the pre-coordination database. Region 43 got its first person to CAPRAD training in early June so the next version should be able to include further information on spectrum distribution in the initial pre-packing database.
4	06/25/03	This version has a few clean-ups and text adds to get it closer to final form and the Minutes of this meeting reflect more debate on policy questions that will need to be resolved in upcoming meetings to get to the final draft.
5	11/19/03	Very minor changes from Version 4. Incorporated the initial CAPRAD packing channel allocations as the baseline.
6	02/22/04	Added Table of Contents, removed unnecessary Appendices, cleaned up notational texts as footnotes, made edits suggested since last meeting, expanded text in some sections

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## Preamble

In order to help alleviate major wireless radio congestion, the Federal Communication Commission (FCC) has released 60 MHz of television broadcast spectrum – channels 60-69 (746-806 MHz) for use to land mobile radios. In addition to alleviating the congestion for wireless radio systems, the FCC also hoped to provide public safety access to new technologies that may require additional use of bandwidth, and promote interoperability. To accomplish these goals, the FCC allocated this spectrum as follows: 24 MHz for public safety, 30 MHz for commercial use, and 6 MHz for guard band.

Within the 24 MHz of spectrum for public safety, the following is a breakdown of how that bandwidth can be used:

- 2.6 MHz allocated for interoperability
- 12.6 MHz allocated for general use
- 2.4 MHz state license
- 6.4 MHz reserved

The Regional Planning Committee (RPC) is tasked with the administration and management of the 12.6 MHz general use spectrum. Washington State has a State Interoperability Executive Committee who is tasked with the administration and management of the interoperability and state license spectrum.

## Section 1 – Regional Planning Committee Leadership

At the time of adoption and transmittal, the following individuals serve in leadership roles in the Region 43 Regional Planning Committee (RPC):

Chairperson	Kevin Kearns King County Information and Telecommunications Services 700 5 <sup>th</sup> Avenue, Suite 2300 Seattle, WA 98104-5002 Phone: 206-296-0660 Email: <a href="mailto:kevin.kearns@metrokc.gov">kevin.kearns@metrokc.gov</a>
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Vice-Chairperson	Clark Palmer Washington State Patrol 321 Cleveland Ave Suite F Tumwater, WA 98501 Phone: (360) 705-5371 Email: <a href="mailto:cpalmer@wsp.wa.gov">cpalmer@wsp.wa.gov</a>
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Secretary	Temporarily Vacant as of this date
Treasurer	Spencer Bahner Snohomish County Emergency Radio System 1121 SE Everett Mall Way, Suite 210 Everett, WA 98201 Phone: (425) 407-3925 Email: <a href="mailto:sbahner@sers800.org">sbahner@sers800.org</a>

From time to time, as described in our By-Laws, these positions will be subjected to re-election. At any such time that one of these four positions changes hands, the Chair will be responsible for taking the following actions:

- Providing notice to the FCC of the changes
- Providing notice to the NPSTC Support Office of the changes
- Modifying the Region 43 web site ([www.region43.org](http://www.region43.org)) to reflect the changes

Such changes will not be considered Plan modifications, and will not require that this document be reissued to the FCC for public notice and comment cycles.

## Section 2 – Regional Planning Committee Membership

Appendix \_\_\_\_ of this Plan lists all meeting dates and locations and Appendix \_\_\_\_ lists the Voting and Non-Voting membership in the Region 43 RPC and the meetings they have participated in up to the point that this Plan was submitted to the FCC for approval. Minutes of all meetings are posted on the Region 43 web site ([www.region43.org](http://www.region43.org)). The meeting attendance roster will be kept current for all future meetings after Plan submittal and posted on the Region 43 web site.

## Section 3 – Description of the Region

### 3.1 General Description

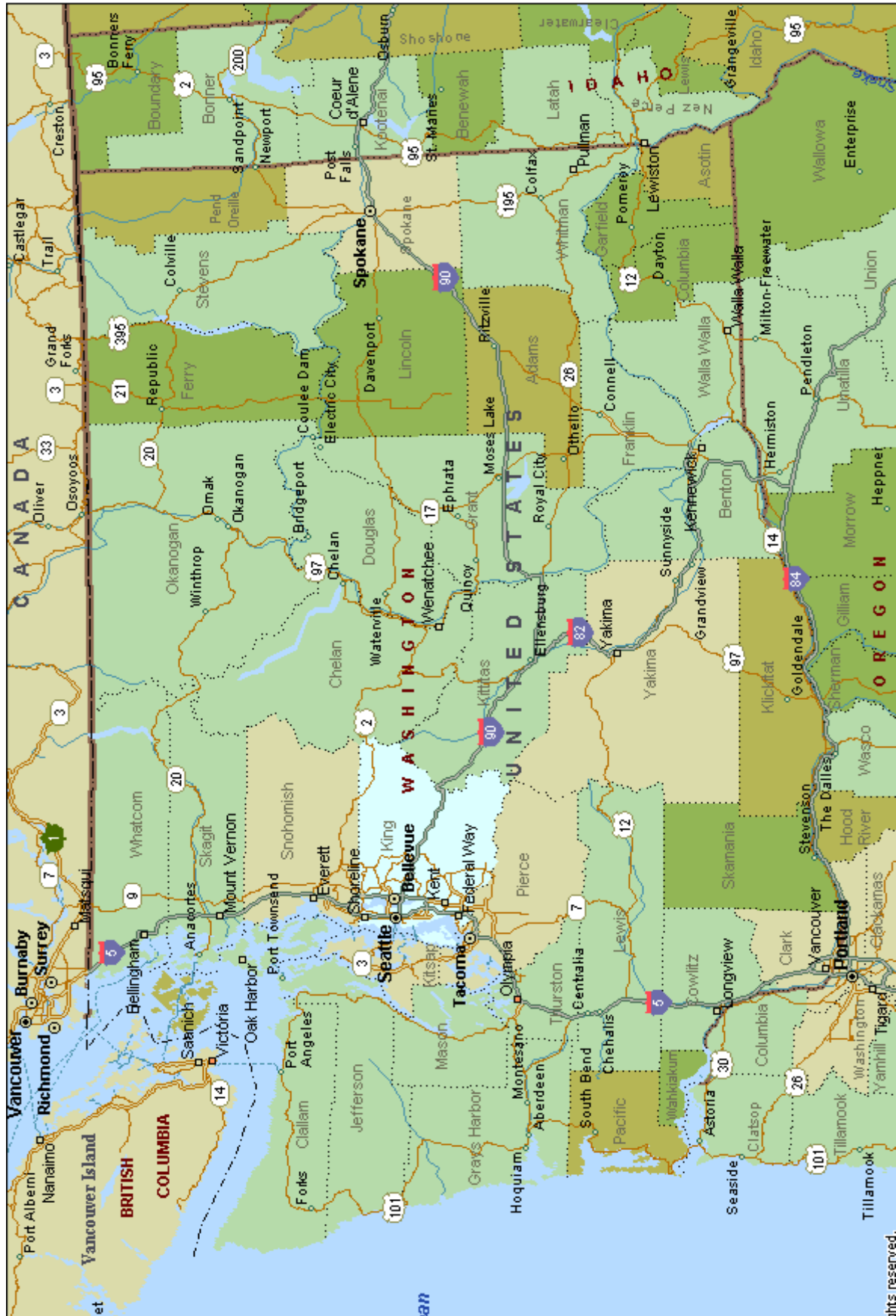
The State of Washington is a single planning region (Region 43) for both the 700 MHz and 800 MHz public safety bands. Region 43 is bordered by Canada on the North, the Pacific Ocean on the West, the State of Idaho (Region 12) to the East, and the State of Oregon (Region 35) to the South.

The Cascade Mountains divide the state into a western and eastern half that have uniquely different population distributions, economic conditions and climates. While much of the state is composed of wilderness or rural areas, there are significant areas of urban and sub-urban development as well. Most of these are in the western portion of the state, and the most significant of these is in the Puget Sound basin, from Olympia (the state capitol) in the south to Everett in the north.

Seattle (King County) is the largest city in this region and along with the cities of Tacoma (Pierce County), Bellevue (King County) and Everett (Snohomish County) make up a metropolitan area that is the most significant economic engine in the state. Other key urbanized areas in the western portion of the state include the Bellingham (Whatcom County) area near the Canadian border and the Vancouver (Clark County) area which is a part of the Portland metropolitan area.

The eastern portion of the state is significantly more rural and agricultural in character than the western side of the state. The largest urban area is anchored by the city of Spokane (Spokane County) and other semi-urban pockets exist in Yakima (Yakima County) and the “tri-cities” area of Richland, Pasco and Kennewick (Benton and Franklin Counties).

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There are 39 counties in the state with populations indicated in the table below:

	2000 Census	2002 Estimate	% of Total State 2002 Population
Washington Total	5,894,121	6,068,996	
King County	1,737,034	1,759,604	28.99%
Pierce County	700,820	732,282	12.07%
Snohomish County	606,024	633,947	10.45%
Spokane County	417,939	427,506	7.04%
Clark County	345,238	370,236	6.10%
Kitsap County	231,969	236,174	3.89%
Yakima County	222,581	224,823	3.70%
Thurston County	207,355	217,641	3.59%
Whatcom County	166,814	174,362	2.87%
Benton County	142,475	150,366	2.48%
Skagit County	102,979	106,906	1.76%
Cowlitz County	92,948	94,514	1.56%
Grant County	74,698	77,983	1.28%
Island County	71,558	75,050	1.24%
Lewis County	68,600	69,710	1.15%
Grays Harbor County	67,194	68,470	1.13%
Chelan County	66,616	67,050	1.10%
Clallam County	64,525	66,302	1.09%
Walla Walla County	55,180	56,149	0.93%
Mason County	49,405	51,008	0.84%
Franklin County	49,347	52,745	0.87%
Whitman County	40,740	40,631	0.67%
Stevens County	40,066	40,556	0.67%
Okanogan County	39,564	39,186	0.65%
Kittitas County	33,362	34,370	0.57%
Douglas County	32,603	33,409	0.55%
Jefferson County	25,953	26,761	0.44%
Pacific County	20,984	20,778	0.34%
Asotin County	20,551	20,453	0.34%
Klickitat County	19,161	19,381	0.32%
Adams County	16,428	16,434	0.27%
San Juan County	14,077	14,565	0.24%
Pend Oreille County	11,732	12,008	0.20%
Lincoln County	10,184	10,096	0.17%
Skamania County	9,872	10,049	0.17%
Ferry County	7,260	7,268	0.12%
Columbia County	4,064	4,103	0.07%
Wahkiakum County	3,824	3,793	0.06%
Garfield County	2,397	2,327	0.04%

Source: <http://eire.census.gov/popest/data/counties/tables/CO-EST2002-ASRO-01-53.xls>

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## 3.2 Existing Interoperability and Mutual Aid Systems

There are a significant number of established Interoperability systems and standards in place within Washington State. The listing below is relatively complete and provides the user of this plan further information about non-700 MHz Interoperability opportunities in the Region.

- **LERN (155.370 MHz) and SuperNet and links to trunking systems – Still need a draft of this paragraph - Clark Palmer**
- **NLECS (155.475) – Still need a draft of this paragraph – Clark Palmer**
- **On-Scene Command and Coordination Radio (OSCCR) – 156.135 MHz**, is managed by the state Emergency Management Division (EMD) through a mutual planning agreement with APCO and Washington State Department of Transportation (WSDOT). Authorization to use OSCCR must be requested through EMD. This is a mutual aid channel to be used by state and local public safety agencies at the scene of an incident using only mobiles and/or portables.
- **FIRECOM and/or REDNET – 153.830 MHz**, is managed by the Washington State Fire Chiefs Association. Authorization to use FIRECOM/REDNET must be requested through the association. This is a mutual aid channel which can be used by fire districts and departments for command, control, and coordination at the scene of an incident.
- **DNR Common – 151.415 MHz** is managed by the state Department of Natural Resources (DNR). Authorization to use DNR Common must be requested through the appropriate DNR Region or Division manager to the DNR Radio System Manager. State Parks & Recreation, state Department of Ecology, state Fish & Wildlife, and US Forest Service are primary users of the channel. Local jurisdiction authorization is usually only granted for use on an emergency basis primarily for mutual support between local fire districts and DNR.
- **Search and Rescue (SAR) – 155.160 MHz**, is managed by the state Emergency Management Division (EMD). Authorization to use SAR must be requested through EMD. This is a mutual aid channel to be used only when conducting search and rescue operations using only mobiles and portables.
- **NPSPAC 800 MHz Interoperability Channels –** In addition to the nationally adopted ICALL and ITAC channels in the NPSPAC band, Region 43 further identified a set of five (5) channels that could be used for on-scene tactical purposes in a simplex mode or on temporary low-power repeaters for significant events. The Plan further identifies operational practices to be followed in using both the national channels and these regional channels. Full details should be read in the Region 43 NPSPAC plan, which can be found in the 800 MHz section of [www.region43.org](http://www.region43.org).

National Calling Channel (ICALL):	821/866.0125 Mhz (Chan. 601)
National Working Channel (ITAC-1):	821/866.5125 Mhz (Chan. 639)
National Working Channel (ITAC-2):	822/867.0125 Mhz (Chan. 677)
National Working Channel (ITAC-3):	822/867.5125 Mhz (Chan. 715)
National Working Channel (ITAC-4):	823/868.0125 Mhz (Chan. 753)

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Note 1: The ICALL channel shall be used to contact other users in the Region for the purpose of requesting incident related information and assistance. If necessary, the calling party will be asked to move to one of the ITAC channels for continuing incident operations or other interoperability communication needs. This channel can be implemented in full repeat mode.

Note 2: The ITAC channels are to be used primarily for coordination activity between different agencies in a mutual aid situation, or emergency activities of a single agency. Incidents requiring multi-agency participation will be coordinated over these channels by the agency controlling the incident. These channels can be implemented in full repeat mode.

Region 43's Tactical Channels are identified with intended primary uses but all channels are available for all public safety functions if incident conditions warrant.

STATEOPS-1 – Fire/EMS	822/867.5375 Mhz (Chan. 716)
STATEOPS-4 – Fire/EMS	822/867.6125 Mhz (Chan. 722)
STATEOPS-2 – Law Enforcement	822/867.5625 Mhz (Chan. 718)
STATEOPS-5 – Law Enforcement	822/867.6375 Mhz (Chan. 724)
STATEOPS-3 – General Government	822/867.5875 Mhz (Chan. 720)

Note 3: The STATEOPS-1 through 5 are to be used only in the "simplex" mode using the repeater output frequency, for interoperability and other "repeater talk-around" needs. STATEOPS-3 will be implemented in simplex mode on the repeater output frequency (867.5875 Mhz). Fixed base stations and fixed mobile relay stations are prohibited on these tactical channels. Temporary portable mobile relay stations with the minimum required power shall be permitted. STATEOPS channels are "primarily or recommend" to be used by the intended services but it isn't a hard requirement.

- **King County Mutual Aid Radio System (KC MARS)** – King County operates a network of simulcast VHF and UHF repeaters that are cross-patched to a Talkgroup on their countywide 800 MHz trunked radio system. This allows conventional VHF and UHF radio users to have interoperable communications with all law enforcement (and many fire) agencies that use the trunked system.
  - The VHF channel pair is 154.650 MHz for repeater input and 155.190 MHz for repeater output. CTCSS tone 100.00 Hz is used.
  - The UHF channel pair is 465.550 MHz for repeater input and 460.550 MHz for repeater output. CTCSS tone 103.5 Hz is used.
- **MEDCOM** - The following medical communications (MED) channels are common channels to be used for medical control and coordination.
  - MED 1 – TX 463.000 MHz/RX 468.000 MHz is the statewide medical coordination channel which will enable ALS, BLS, and emergency medical facility personnel to talk when a vehicle is out of its primary area or unable to contact the facility through the medical control channel of the area. MED 1 – 463.000 MHz is designated as the "talk-around" channel for local coordination.
  - MED 7 – TX 463.150 MHz/RX 468.150 MHz is common throughout the state and may be used for local on-scene coordination between units and air-to-ground communications.
  - MED 8 and MED 10 were in the process of being licensed by Kitsap County to operate on Gold Mountain at the time this Plan was written. No further details were known at this time.

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- **Hospital Emergency Administrative Radio (HEAR)** – 155.340 MHz is a common channel used by hospitals for communication with ambulance services for medical control. This channel can be used while at the scene or enroute to the emergency medical facility. Licensing for use of this channel is requested through the Federal Communications Commission (FCC).
- **Inter-System Patching** – In addition to the various Interoperability capabilities listed above, many of the large 800 MHz trunked radio systems in the state, most notably those in King County, Snohomish County, Clark County, Benton County, and the City of Tacoma, have numerous cross-band patching capabilities between their trunked systems and one or more of these lower-band Interoperability channels. This allows users across these bands to achieve Interoperable communications, as long as the common channels and coverage areas are adequately identified with the established incident management structure and patches are effectively executed by dispatch centers.

**The State Interoperability Executive Committee (SIEC)** was tasked with the responsibility to conduct an inventory and assessment of interoperability in the state. The following language is extracted from the enabling legislation, Substitute House Bill 1271.

**NEW SECTION. Sec. 5.** A new section is added to chapter 43.105 RCW to read as follows:

(1) The state interoperability executive committee shall take inventory of and evaluate all state and local government-owned public safety communications systems, and prepare a statewide public safety communications plan. The plan must set forth recommendations for executive and legislative action to insure that public safety communications systems can communicate with one another and conform to federal law and regulations governing emergency communications systems and spectrum allocation. The plan must include specific goals for improving interoperability of public safety communications systems and identifiable benchmarks for achieving those goals.

(2) The committee shall present the inventory and plan required in subsection (1) of this section to the board and appropriate legislative committees as follows:

- (a) By December 31, 2003, an inventory of state government-operated public safety communications systems;
- (b) By July 31, 2004, an inventory of all public safety communications systems in the state;
- (c) By March 31, 2004, an interim statewide public safety communications plan; and
- (d) By December 31, 2004, a final statewide public safety communications plan.

(3) The committee shall consult regularly with the joint legislative audit and review committee and the legislative evaluation and accounting program committee while developing the inventory and plan under this section.

### 3.3 Impacts on Existing Plans as a Result of Adding 700 MHz Interoperability Channels

*Comments from past meetings – still needs final wordsmithing*

- *will add needed interop capacity*
- *will add data interop potential that doesn't exist today*
- *will add complexity,*

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- *through inter-system patches will allow interop with legacy 800 MHz and lower band infrastructures,*
- *will potentially add confusion for field units which can be addressed through training and exercises,*
- *some of the existing interop channels are simplex or conventional repeater only environments so field-based RF gateways will need to be used for tactical on-scene interoperability,*
- 

## 3.4 Overview of Public Safety Entities in the Region

Washington State has a long history of a somewhat populist culture in which the number of local government bodies tends to multiply. The following is a brief description of the most predominate entities in the Region that will need to be accommodated by this Plan in some fashion.

### 3.4.1 Federal Agencies

The Region has the typical presence of federal public safety agencies with added presences by some agencies due to the significant number of international ports and our border with Canada. There is also a significant military presence in the Region with multiple large bases from all military branches. Due to the significant amount of State and Federal forest lands and national parks in the Region, there is also a significant amount of interaction between state and local fire agencies and the various federal agencies involved in fire suppression activities.

### 3.4.2 State Agencies

The Washington State Patrol, Washington State Department of Transportation and the Washington State Department of Natural Resources all play significant roles in providing public safety services. Additional State agencies have roles in providing public safety services to residents of the State of Washington. The Emergency Management Division of the Military Department is responsible for providing statewide coordination of resources during extreme emergency or disaster conditions.

*State Agencies need to collaborate to develop a piece of text to describe the State 2.4 MHz of spectrum and how it is being administered for State agencies. – Terry Miller*

### 3.4.3 County Agencies

The most significant public safety function of each county is its Sheriff's Office. County Sheriff's are directly elected public officials in all 39 counties, and are generally responsible for law enforcement in the unincorporated areas of the counties and in some incorporated cities under contracted services arrangements. Counties are also responsible for operating public health programs and some extend this into operating basic and advanced life support services directly to the public.

There are also the normal array of other governmental services offered by counties that contribute to the public safety, including the operation of public works and roads agencies, surface water management functions, water systems, sewage and sewage treatment systems, bus and transportation systems, etc.

### 3.4.4 City Agencies

The police department is the most common public safety service provided by incorporated cities. Many cities also operate a fire department and typically these fire departments offer basic life support (and occasionally advanced life support) EMS services. Some cities have not formed fire departments and instead receive fire protection from fire protection districts that often pre-date the formation of the city and

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have larger jurisdictional boundaries than the cities. Cities also often provide services such as roads and public works functions.

## 3.4.5 Special Purpose Districts

There are a considerably large number of special purpose districts in Washington State. The most common of these are fire protection districts, school districts, water districts and sewer districts, but there are also hospital districts, port districts, electric districts, library districts, weed districts, etc. These special districts often have jurisdictional boundaries that are quite large and often surround one or more incorporated cities. They are typically led by a 3 to 5 member board of commissioners who are directly elected by the public in the district.

## 3.4.6 Tribal Lands

*Need to add a section to explain the diversity of tribal lands in the Region*

## 3.4.7 E-911 and PSAPs

*Allan Josue will get the State E911 Program Office to draft a paragraph for this section.*

## Section 4 – Information and Notification Process

The Region 43 regional planning process for the 700 MHz band was officially convened on November 14, 2000 in a meeting held at the King County Emergency Management Division, 7300 Perimeter Road South, Seattle, Washington, 98108. Kevin Kearns, Chair of the Region 43 NPSPAC 800 MHz Regional Review Committee, served as the Convenor. This meeting was properly Noticed by the FCC under DA 00-2250 published on October 3, 2000.

Since NCC action was still underway at this time, the Committee realized it would only be engaging in factfinding and information building until final NCC action was completed and FCC rules established. There, subsequent meetings of the Committee were announced via various mechanisms, but few were put on Notice to the FCC. Established emailing lists for the Region 43 800 MHz process were all advised of 700 MHz meetings as were known interested parties such as the state APCO Chapter, Police and Fire Chiefs Associations, etc.

A web site was established for the region ([www.region43.org](http://www.region43.org)) and all meeting agendas and minutes were posted on that web site, as well as key resource documents and links to other web sites and web documents. Further, an information sheet was developed that was posted on the web site and provided to vendor representatives to distribute while making sales visits to customers throughout the state. All of this was done in an effort to raise awareness of the availability of the 700 MHz band and the existence of a regional planning process.

Finally, the web site had a tool on the home page that would allow any interested party to sign up for a listserver function ([region43700mhz@metrokc.gov](mailto:region43700mhz@metrokc.gov)). Every meeting announcement, resource documents, discussion threads and other information were circulated through this list for the broadest possible transfer of information. A listing of the listserver members at the time this Plan was filed with the FCC for approval is provided in Appendix \_\_\_\_.

Further efforts to increase awareness and visibility for the planning process included:

- Posting information and a web link on the web site of the Washington Chapter of APCO (<http://www.apcowa.org/links.htm>).
- Emailing the information flyer to the Washington APCO listserver as an attachment to an email message encouraging participation.

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- Posting a web link on the Western Washington Cooperative Interference Committee (WWCIC) web site (<http://www.wwcic.org/links.html>).
- Distributing the information flyer at the Washington APCO annual conference in June 2003 to conference attendees.
- Making a presentation on the regional planning process to the WWCIC meeting in June 2003 in Blaine, WA, near the Canadian border. This meeting was also attended by a number of Canadian participants which expanded their awareness of our planning efforts in Region 43 in specific and in the U.S. in general.
- Making a presentation on the regional planning process at the Pacific Northwest Digital Government Summit in August 2003 in Seattle, WA. This conference was attended by numerous government technology officials from around the Northwest and the presentation was geared to make sure they were aware of the licensing opportunities in this band and how to get engaged in the planning process in their state.
- Distributed copies of the information flyer to an email list provided by the Pacific Northwest Indian Fisheries Commission in November 2003.
- Making a presentation at the APCO Western Regional conference in March 2004 in Spokane, WA. This provided an opportunity to broaden the awareness of regional planning efforts in this band to attendees from many western states.
- 

In late 2003, the Committee determined that sufficient information was in hand to allow us to take the draft plan document we'd been slowly working on and move it through completion, broadly advertised regional review and scrutiny, coordination with neighboring regions (Region 12 – Idaho and Region 35 – Oregon) and ultimate submission to the FCC for approval. On February 4, 2005, under DA 04-275, we gave Notice of our planning schedule through June 2004.

At the March 4, 2004 meeting a near-final Draft version of the Plan (referred to as Draft Version 6) was reviewed. Comments taken in this meeting related to the Interoperability section were reduced to a written recommendation to the SIEC for language changes/revisions since the SIEC has asserted jurisdiction over the Interoperability aspects of this Plan.

## ***Add language on the outreach efforts commenced January 2004 by the Outreach Workgroup***

### Section 5 – Regional Plan Summary

***The text of this section still needs to be drafted. It will basically summarize the following points:***

- ***the Committee held off on producing a final plan until several other plans had been vetted by the FCC and we could learn from their experiences***
- ***the plan embraced the CAPRAD pre-packing approach and did not alter the county-by-county channel block allocations***
- ***the plan built off of our experiences in the 800 MHz band***
- 

### Section 6 – Interoperability

#### **6.1 Introduction**

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The ability for agencies to effectively respond to mutual aid requests directly depends on their ability to communicate with each other. Washington State is subject to natural disasters such as Mount St. Helens, the Nisqually Earthquake, and wild land fires and mutual aid is common among agencies. This plan seeks to facilitate the communications necessary for effective mutual aid.

Washington State will administer the interoperability channels via its State Interoperability Executive Committee (SIEC) under National Coordination Committee's (NCC) guidelines. In addition to the role described within this document, Washington's SIEC will be pursuing other activities relating to Interoperability outside of the 700 MHz spectrum, including assisting in the coordination of interoperability spectrum resources at VHF, UHF and 800 MHz.

Washington State adopts the ANSI/TIA 102 Standards, i.e. Project 25 digital protocols, as the Digital Interoperability Standard for the conventional-only mode of operation on the narrowband voice & data interoperability channels as adopted by the NCC.

There are 2 Calling channel sets and 30 Tactical channel sets. Channel sets are comprised of two 6.25 kHz channels each.

The Tactical channel sets are subdivided into the following categories for Washington State:

- 2 for Emergency Medical Services
- 2 for Fire Services
- 2 for joint Fire and Emergency Medical Services
- 4 for Law Enforcement Services
- 2 for Mobile Repeater operation
- 2 for Other Public Services
- 12 for General Services, and
- 2 for Data

While defined as intended for specific operational needs, the Tactical channel sets may be assigned for alternate uses by the Incident Commander. As an example, the Incident Commander may find that a fire channel is the only Tactical channel resource constructed in an area where an EMS response is called for. Under these circumstances, functional reassignment of the channel may be made on a coordinated basis for the duration of the incident under direction of the Incident Commander.

## 6.2 Calling Channels

Washington State operates two Calling channel sets. The Calling channels set designations within Washington State are "CALL 7A" and "CALL 7B". These calling channel sets shall be monitored, on a 24 x 7 basis, by licensees who employ 700 MHz channels from the general use or state pool as a part of their infrastructure. When calling channels are integrated into infrastructure, their mobile coverage must at least match the coverage of the other channels in the system. In addition to the usual calling channel functions, the calling channels may be used to notify users when a priority is declared on one or more of the tactical interoperability channels.

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## 6.3 Requirement for Infrastructure to Support Interoperability Channels<sup>1</sup>

All agencies requesting more than four channels from the 700 MHz channel pool for normal operations will be required to implement at least one of the CALL channels in a repeater mode. This implementation shall normally provide mobile area coverage over essentially the same service area as the primary communications channel assignments. The SIEC may authorize reduced coverage where such a reduction is required due to good engineering standards, interference mitigation or other specialized requirements. This infrastructure may be configured to operate in a half duplex mode to minimize intra-system interference under routine conditions, provided however that a wireline equivalent connection delivers received audio to a dispatch point where 24 x 7 monitoring will take place. Approval of such operation also requires the ability for the dispatch point to re-enable normal repeater operation when so requested.

Agencies requesting nine to fourteen channels are required to establish similar infrastructure for at least one additional law enforcement and one additional fire/EMS interoperability channel. Systems requesting more than fifteen channels will require implementation of a CALL channel, one law enforcement channel, one fire channel, and one EMS channel.

Agencies are encouraged to provide for additional interoperability channels and improved grades of service beyond the requirements establish in this Section.

## 6.4 Tactical Channels

All interoperability channels, except as described below, shall be used for conventional-only operation. Normally, users will 'call' a dispatch center on one of the "Calling Channels" and be assigned an available tactical channel. Deployable narrowband operations (voice, data, and trunking) shall be afforded access to the same pool of channels used for similar fixed infrastructure operations. In the event of conflict between multiple activities, prioritized use shall occur. Use prioritization shall be:

- 1 Disaster and extreme emergency operations for mutual aid and interagency communications.
- 2 Emergency or urgent operation involving imminent danger to life or property.
- 3 Special event control, generally of a preplanned nature (including Task Force operations).

<sup>1</sup> The RPC has identified a number of policy related questions in this section, that will need to be rectified with the SIEC, including:

- What is a channel (6.25 kHz, 12.5 kHz, 25 kHz)?
- Does this apply to both the narrowband and wideband channels, or just narrowband voice?
- If a licensee implemented only wideband data channels, do they have an obligation to implement voice I/O functionality?
- If a licensee implements both narrowband and wideband channels, how do we count channels?

These questions will be addressed to the SIEC in a letter recommending that the standard be changed to apply to narrowband voice channels only, that no voice I/O be required if the licensee only uses wideband data channels, and that required channel counts be based on the total amount of spectrum consumed based on the following table:

<b><i>Bandwidth Licensed</i></b>	<b><i>Required Number of Interoperability Repeaters</i></b>
<b><i>0 to 50 kHz</i></b>	<b><i>None</i></b>
<b><i>62.5 to 100 kHz</i></b>	<b><i>1 Call Channel</i></b>
<b><i>112.5 to 175 kHz</i></b>	<b><i>1 Call Channel</i></b> <b><i>1 Law Enforcement Channel</i></b> <b><i>1 Fire/EMS Channel</i></b>
<b><i>&gt; 187.5 kHz</i></b>	<b><i>1 Call Channel</i></b> <b><i>1 Law Enforcement Channel</i></b> <b><i>1 Fire Channel</i></b> <b><i>1 EMS Channel</i></b>

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## 6.5 Encryption

Use of encryption is prohibited on Calling channels and permitted on all other interoperability channels. A standardized encryption algorithm for use on the interoperability channels must be TIA/EIA IS AAAAA Project 25 DES encryption protocol.

## 6.6 Deployable Systems

Washington State supports the use of deployable systems, both conventional and trunked. Deployable systems are prepackaged systems that can deploy by ground or air to an incident to provide additional coverage and capacity on interoperability channels. This strategy minimizes the expense of installing fixed infrastructure and recognizes the difficulty of providing complete coverage to Washington State due to environmental constraints.

General Public Safety Service Channels labeled GTAC 21 and GTAC 31, GTAC 51 and GTAC 61, or both, shall be made available for “deployable” equipment used during disasters and other emergency events that place a heavy, unplanned burden upon in-place radio systems. Use of deployable conventional and trunked interoperability systems will be coordinated so as to minimize interference with permanently installed conventional interoperability infrastructure.

## 6.7 Trunking on the Interoperability Channels

Trunking the Interoperability channels for deployable or inactive, pre-positioned systems shall be permitted on a secondary basis to fixed conventional infrastructure. Such use shall be limited to operation on eight specific 12.5 kHz channel sets, divided into two subsets of four 12.5 kHz channels. Trunked operation on the Interoperability channels is intended to provide for heavy communications needs at specific locations and these channels are not intended to be used in the trunked mode for permanent operations. In future revisions to this Plan, the Washington state SIEC anticipates developing additional plans which anticipate talkgroup structures, enabling the use of the interoperability spectrum for deployable or inactive, pre-positioned systems.

## 6.8 Standard Operating Procedures on the Trunked I/O Channels For I/O Situations Above Level 4<sup>2</sup>

The safety and security of life and property determines appropriate interoperable priorities of access and/or reverting from secondary trunked to conventional operation. Access priority for “mission critical” communications is recommended as follows:

1. Disaster and extreme emergency operations for mutual aid and interagency communications;
2. Emergency or urgent operation involving imminent danger to life or property;
3. Special event control, generally of a preplanned nature (including Task Force operations)

The SIEC will determine whether a wide-area I/O conversation has priority over a local I/O conversation.

## 6.9 Data Only Use of the I/O Channels

Narrowband data-only interoperability operation on the Interoperability channels on a secondary basis shall be limited to two specific 12.5 kHz channel sets. One set is defined by GTAC 21 and the other by GTAC 51.

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<sup>2</sup> The RPC will recommend to the SIEC that the abbreviation “I/O” be used in the opening discussion of the Section so that the use of “I/O” throughout the rest of the section is understandable.

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## 6.10 Wideband Data Standards

Within the 12 MHz of spectrum designated for high capacity, wide bandwidth (50 to 150 kHz) channel usage, there are eighteen 50 kHz (or six 150 kHz) channels designated for wideband interoperability use.

## 6.11 State Interoperability Executive Committees

Washington State will use the Incident Command System (ICS) as a guideline in developing their regional interoperability plans.

Washington State will hold the license on interoperability channels for all infrastructure and subscriber units within Washington State.

Washington State will have oversight of the administration and technical parameters of the infrastructure for the interoperability channels within the state.

## 6.12 Minimum Channel Quantity

The minimum channel quantity for Calling and tactical channel sets requires 8 I/O channel slots in each subscriber unit. Including Direct (simplex) mode on these channel sets, up to 16 slots in each radio will be programmed for I/O purposes. Backbone issues will be deferred to the SIEC. Subscriber units, which routinely roam through more than one jurisdiction up to nationwide travel will require more than the minimum channel quantity.

The “CALL”ing channel sets (CALL 7A and CALL 7B) shall be implemented in all voice subscriber units in repeat-mode and direct (simplex) mode. “Direct” mode is permitted in the absence of repeat operation or upon prior dispatch center coordination. If the local CALLing channel set is not known, CALL 7A shall be attempted first, then CALL 7B. Attempts shall be made on the repeater mode first then on the direct (simplex) mode.

A minimum set of “TAC”tical channels shall be implemented in every voice subscriber unit in the direct (simplex) mode. Specific channel sets are shown below .

OTAC33 and OTAC63 channel sets  
MTAC23 & 5MTAC3 channel sets  
GTAC31 & 61channel sets

**NOTE:** Selection of the above TAC channels based on revised Table of Interoperability Channels. Channel labels are a compromise between 4 th R&O and IO-0062D-20010118.

Voice subscriber units subject to multi-jurisdictional or nationwide roaming should have all I/O voice channels, including direct (simplex) mode, programmed for use.

## 6.13 Direct (Simplex) Mode

In direct (simplex) mode, transmitting and receiving on the output (transmit) side of the repeater pair for subscriber unit-to-subscriber unit communications at the scene does not congest the repeater station with unnecessary traffic. However, should someone need the repeater to communicate with the party who is in “direct” mode, the party would hear the repeated message, switch back to the repeater channel, and join the communications. Therefore, operating in direct (simplex) mode shall only be permitted on the repeater output side of the voice I/O channel sets.

## 6.14 Common Channel Access Parameters

Common channel access parameters will provide uniform I/O communications regardless of jurisdiction, system, manufacturer, etc. This national requirement should apply to base stations and subscriber units. This should apply to fixed or temporary operations. This should apply to tactical, vice, or other mutual aid conventional I/O use.

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Common channel access parameters for all voice I/O shall utilize the default values (ANSI/TIA/EIA-102,BAAC-2000, approved April 25, 2000) provided in every radio regardless of manufacturer. Any common channel access parameters not provided shall be programmed accordingly. These parameters include the following:

P25 Network Access Code - \$293 (default value)  
P25 Manufacturers ID - \$00 (default value)  
P25 Designation ID - \$FFFFFF (designates everyone)  
P25 Talkgroup ID - \$0001 (default value)  
P25 Message Indicator \$000000... 0, out to 24 zeros (unencrypted)  
P25 Key ID - \$0000 (default value)  
P25 Algorithm ID - \$80 (unencrypted)

Any deviation from \$293 will not be permitted unless the SIEC (or the RPC) can demonstrate Plan amendment through the FCC-approved process that the intent of \$293 will be preserved on ALL conventional voice I/O channels – transmit and receive.

## Section 7 – Additional Spectrum Set Aside for Interoperability in the Region

Due to the significant number of I/O channels already defined in the national planning structure, no additional I/O channels defined at this time within Region 43. The RPC may reallocate some General Use channels for I/O use in the future if we find a need exists. If we do define additional regional I/O channels, they will fall under the same SIEC administration as the nationally defined I/O channels.

## Section 8 – Allocation of General Use Spectrum

The initial allocation of spectrum in Region 43 has been based on the initial frequency packing done to populate the CAPRAD database. This allocation was done on a per-county basis and this is believed to be the best basis for the initial Plan for Region 43. Since this packing was done on a national basis, coordination with neighboring Region 12 (Idaho) and Region 35 (Oregon) are already accomplished in the CAPRAD data, so limited issues should arise in Plan coordination with these neighboring Regions as long as they don't modify CAPRAD assignments in their border areas. Therefore, Region 43 believes this is the most rational basis for our initial spectrum allocation.

The initial spectrum allocation is provided in Appendix \_\_\_\_.

Based on criteria described further in this section, and in Section 9, the Region 43 Regional Planning Committee will manage individual assignments to agencies within these counties.<sup>3</sup>

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<sup>3</sup> The Committee has discussed two possible options for running filing-windows under this plan:

Two concepts have been proposed for running filing windows after initial plan adoption:

### Option 1

- Six months after FCC approval of the Plan (presumably mid 2004), the first filing window would close.
- Seven successive filing windows would be run at 6-month increments (presumably then the final filing window would close at the end of 2007).
- During these first four years of the plan, the RPC would only consider channel assignments within the county-by-county allocations in the CAPRAD database as defined in the adopted Plan.
- Following the close of the eighth filing window, any valid request for channels would be granted regardless of whether the assignment existed in the pre-coordination database. Basically it would be “open season” after four years and assignments would be made as long as co-channel and adjacent-channel interference criteria can be met.

### Option 2

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## *The following needs to be developed in textual form*

Regions shall define their application solicitation and processing methodology. Items to consider:

- Filing windows
- First-come, first-served
- Set-asides, reserve pools
- Time period for the RPC to review the applications
- Re-assignment/re-allotment and/or recovery of channel allotments
- Slow growth procedures
- Time limit on channels licensed and not constructed – 5 years
- Procedures to use near Canadian or Mexican border (if applicable)

The RPC and the frequency coordinators are responsible for ensuring that the information contained in the CAPRAD pre-coordination database is updated when licenses are granted or canceled and/or allotments changed.

## Section 9 – Explanation of How Needs Were Assigned Priorities in Areas Where Not All Eligibles Could Receive Licenses

A scoring matrix will be used to evaluate competing applications within the county-by-county assignments or from a general pool once county-by-county allocations sunset. The applications receiving the highest number of points will receive the channels. There are seven scoring categories:

### **9.1 Service (Maximum 350 points)**

Police, fire, local government, combined systems, multi-jurisdictional systems, etc.

### **9.2 Intersystem & Intra-system interoperability (Maximum 100 points)**

How well the proposed system will be able to communicate with other levels of government and services during an emergency on “regular” channels, not the I/O channels. Interoperability must exist among many agencies to successfully accomplish the highest level of service delivery to the public during a major incident, accident, natural disaster or terrorist attack. Applicants requesting 700 MHz spectrum shall inform the region of how and with whom they have been achieving interoperability in their present system.

The applicant shall stipulate how they will accomplish interoperability in their proposed system (gateway, switch, cross-band repeater, console cross-patch, software defined radio or other means) for each of the priorities listed below:

- 
- For two years following FCC approval of the Plan, the RPC will receive and process any applications that are made within the individual county-by-county allocations or as otherwise called out in the approved Plan.
  - Beginning with the third year, the RPC will receive and process any applications that can meet co-channel and adjacent-channel interference criteria.

In addition to the above options, it has been suggested that instead of Plan Adoption being the event that triggers the clock we should make it when primary TV stations have cleared the band to allow the channels to be used. This would make the timing different in different parts of the Region, but would be fairer if a portion of the Region wasn't able to use the spectrum for some time due to incumbent TV stations, particularly in Canada. For areas where no TV stations exist, the clock would start with Plan adoption.

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A. Disaster and extreme emergency operation for mutual aid and interagency communications.

B. Emergency or urgent operation involving imminent danger to life or property.

C. Special event control, generally of a preplanned nature (including task force operations).

D. Single agency secondary communications. Priority 4 is the default priority when no other priority is declared and includes routine day to day (non-emergency) operations.

## 9.3 Loading (Maximum 150 points)

Is the system part of a cooperative, multi-organization system? Is the application an expansion of an existing 800 MHz system? Have all 821 channels been assigned (where technically feasible)? A showing of maximum efficiency or a demonstration of the system's mobile usage pattern could be required in addition to loading information. Based on population, number of units (if number of units, are they take home, how many per officer), what are the talk groups?

## 9.4 Spectrum Efficient Technology (Maximum 350 points)

How spectrally efficient is the system's technology? Trunked systems are considered efficient "as well as any technological systems feature, which is designed to enhance the efficiency of the system and provide for the efficient use of the spectrum."

## 9.5 Systems Implementation Factors (Maximum 100 points)

Demonstrate funding, demonstrate system planning. Provide a construction and implementation schedule. Is this going to be slow growth (within the next five years) or is it something that's ready to be implemented now? A document stipulating what the agency is planning to implement signed by an official within the organization who handles the money is required. Some concerns expressed in this category were: how one legally provided a document that proves subsequent year funding; the money does not start flowing until the equipment is in place; some agencies cannot bond until they have the frequencies.

## 9.6 Geographic Efficient (Maximum 100 points)

The ratio of subscriber units to area covered and the channel reuse potential were the two subcategories in this one. "The higher the ratio (mobiles divided by square miles of coverage) the more efficient the use of the frequencies. ... Those systems which cover large geographic areas will have a greater potential for channel reuse and will therefore receive a high score in this subcategory."

## 9.7 Givebacks (Maximum 200 points)

Consider the number of channels given back

Consider the extent of availability and usability of those channels to others.

Total evaluation points above add up to 1350.

Section 10 – An Explanation of How all the Region Eligibles' Needs were Considered, and to the extent possible met

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*Include in this section a description of the counties that lie within the Canadian protection area and the extent to which this was considered in the initial CAPRAD packing and subsequent needs analysis process.*

Section 11 – Evidence that the plan was been successfully coordinated with adjacent regions

*This section will be written following coordination with neighboring Regions*

Section 12 – Detailed Description of How the Plan Put Spectrum to the best possible use

*This section still needs to be written – basically the issue is that the initial allocation is based primarily on population, which is the one of the strongest drivers of need for PS spectrum,*

Section 13 – Detailed description of the future planning process, including but not limited to the amendment process, meeting announcements and minutes, database maintenance and dispute resolution

## **13.1 Future Planning & Minutes**

The RPC shall determine the frequency of meetings and include the schedule in the Bylaws. The RPC shall also define how and where future applications and/or license modifications will be filed. A list of publications and/or websites that will be used to announce the meetings shall be provided. The Bylaws should include a description of the process by which the plan can be amended. The RPC shall record the minutes of all meetings and shall keep them available for three years for review upon request by the FCC.

## **13.2 Database Maintenance**

Region 43 will use the NLECTC pre-coordination database, specifically designed for use in the 746-776/794-806 MHz public safety band. This database will contain frequency availability and preallotment. The Regional Committees shall use the NLECTC pre-coordination database to review pending and/or complete pre-allotments for the adjacent regions to assist in completing their respective plans. A Petition for Reconsideration on mandatory use of the database has been filed by PSWN. The Implementation Subcommittee maintains its recommendation that the use of the NLECTC database be mandatory. Therefore, the language referring to use of the NLECTC database has been retained as mandatory. The language will be changed to reflect the FCC's decision on PSWN's Petition for Reconsideration, if necessary.

The FCC's designated public safety frequency advisors will use the NLECTC pre-coordination database during the application process (pre-coordination). Frequency advisors, as well as RPCs, will be required to maintain the database as the applications are processed and granted by the Commission.

## **13.3 Regional Committee Dispute Resolution Process**

### **13.3.1 Introduction**

The Regional Committee is established under section 90.527 of the FCC's rules and regulations. It is an independent Committee apart from the Federal Communications Commission with authority to evaluate application for public safety uses of the spectrum allocated under FCC Docket 96-86. In addition, appeals

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from decisions made with respect to a variety of matters regulated by the Regional Committee will be heard. The formal requirements of the appeal process are set out below.

In order to ensure that the appeal process is open and understandable to the public, the Regional Committee has developed this procedure. Those involved in the appeal process can expect the Committee and its members to follow the procedures (as may be amended from time to time). Where any matter arises during the course of an appeal that is not dealt with in this document, the Committee will do whatever is necessary to enable it to adjudicate fairly, effectively and completely on the appeal. In addition, the Committee may dispense with compliance with any part or all of a particular procedure where it is appropriate in the circumstances. As the Committee gains experience, it will refine and, if necessary, change its policies. Any changes made to the procedure will require a modification to the Regional Plan and will be made available to the public.

The Regional Committee will make every effort to process appeals in a timely fashion and issue decisions expeditiously.

## **13.3.2 Appeals Committee**

### **13.3.2.1 Members**

The Regional Chair may organize the Committee into Sub-Committees, each comprised of one or more members, the Appeals Sub-Committee is one of those Sub-Committees.

Where an appeal is scheduled to be heard by this Sub-Committee the chair is determined as follows:

- (a) if the chair of the Committee is on the Sub-Committee, he/she will be the chair;
- (b) if the chair of the Committee is not on the Sub-Committee but the vice-chair is, the vice-chair will be the chair; and
- (c) if neither the chair nor the vice-chair is on the Sub-Committee, the Regional Committee will designate one of the members to be the chair.

### **13.3.2.2 Withdrawal or Disqualification of a Committee Member on the Grounds of Bias**

Where the chair or a Committee member becomes aware of any facts that would lead an informed person, viewing the matter reasonably and practically, to conclude that a member, whether consciously or unconsciously, would not decide a matter fairly, the member will be prohibited from conducting the appeal unless consent is obtained from all parties to continue. In addition, any party to an appeal may challenge a member on the basis of real or a reasonable apprehension of bias.

### **13.3.2.3 Correspondence (Communicating) with the Committee**

To ensure the appeal process is kept open and fair to the participants, any correspondence to the Regional Committee must be sent to the Chair and be copied to all other Committee members and other parties to the appeal, if applicable. Committee members will not contact a party on any matter relevant to the merits of the appeal, unless that member puts all other parties on notice and gives them an opportunity to participate. The appeal process is public in nature and all meetings regarding the appeal will be open to the public.

## **13.3.3 The Appeal Process**

### **13.3.3.1 What can be appealed**

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The Committee hears appeals from a determination or allocation and shall include the following: i.e. number of channels assigned, ranking in the assignment matrix, interference, or any other criteria that the region shall establish.

## 13.3.3.2 Who can appeal

An official of the entity who filed the original application to the Regional Committee must be the person who files the appeal on behalf of the entity.

## 13.3.3.3 How to appeal

A notice of appeal must be served upon the Regional Committee. The notice of appeal may be "delivered" by mail, courier, or hand delivered to the office of the Chair and Members of the Committee as listed in the Official Membership List. The Committee will also accept a notice of appeal by facsimile to the Chair and Secretary with the original copy of the notice of appeal served as indicated above.

Certain things must be included in a notice of appeal for it to be accepted. The notice of appeal **must** include:

1. The name and address of the appellant;
2. The name of the person, if any, making the request for an appeal on behalf of the appellant;
3. The address for service of the appellant;
4. The grounds for appeal (a detailed explanation of the appellant's objections to the determination - describe errors in the decision);
5. A description of the relief requested (What do you want the Committee to order at the end of the appeal?);
6. The signature of the appellant or the appellant's representative.

## 13.3.3.4 Time limit for filing the appeal

To appeal a determination or allocation the entity who is subject to the determination must deliver a notice of appeal **within three weeks** after receiving the decision. If a notice of appeal is not delivered within the time required, the right to an appeal is lost. However, the Committee is allowed to extend the deadline, either before or after its expiration based upon a majority plus one vote of the Committee.

## 13.3.3.5 Extension of time to appeal

The Committee has the discretion to extend the time to appeal either before or after the three week deadline. A request for an extension should be made to the Committee, in writing, and include the reasons for the delay in filing the notice of appeal and any other reasons which the requester believes support the granting of an extension of time to file the appeal. A request for an extension should accompany the notice of appeal.

In deciding whether to grant an extension, the Committee will consider whether fairness requires an extension. The Committee will take into account the length of the delay, the adequacy of the reasons for the delay, the prejudice to those affected by the delay and any impacts that may result from an extension. Other factors not identified could be relevant depending on the circumstances of the particular case.

## 13.3.3.6 Rejection of a notice of appeal

The Committee may reject a notice of appeal if:

- (a) it is determined that the appellant does not have standing to appeal; or
- (b) the Committee does not have jurisdiction over the subject matter or the remedy sought.

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Before a notice of appeal is rejected, the Committee will inform the appellant of this in writing, with reasons, and give the appellant a three-week opportunity to make submissions and any potential parties with an opportunity to respond.

## 13.3.3.7 Adding parties to the appeal

In addition to the parties mentioned above, the Committee has the discretion to add any other person who may be “affected” by the appeal as a party to the appeal. Anyone wanting to obtain party status should make a written request to the Committee as early as possible. The written request should contain the following information:

- a. The name, address, telephone and fax number, if any, of the person submitting the request;
- b. A detailed description of how the person is “affected” by the notice of appeal and
- c. The reasons why the person should be included in the appeal; and
- d. The signature of the person submitting the request.

## 13.3.3.8 Intervener status

The Committee may also invite or permit someone to participate in a hearing as an intervener. Interveners are generally individuals or groups that do not meet the criteria to become a party (i.e. “may be affected by the appeal”) but have sufficient interest in, or some relevant expertise or view in relation to the subject matter of the appeal.

Someone wanting to take part in an appeal as an intervener should send a written request to the Committee. The written request should contain the following information: (to be determined by RPC)

Prior to inviting or permitting a person to participate in a proceeding as an intervener, or deciding on the extent of that participation, the Committee will provide all parties with an opportunity to make representations if they wish to do so.

## 13.3.3.9 Type of appeal (written or oral) hearing

An appeal may be conducted by way of written submissions, oral hearing or a combination of both. The Committee will determine the appropriate type of appeal after a complete notice of appeal has been received.

The Committee will normally conduct an oral hearing although it may order that a hearing proceed by way of written submissions in certain cases. Where a hearing by written submissions is being considered by the Committee, the Committee may request input from the parties.

## 13.3.3.10 Burden of proof

The general rule is that the burden or responsibility for proving a fact is on the person who asserts it.

## 13.3.3.11 Notification of expert evidence

The Committee requires any party that intends to present expert evidence at a hearing to provide the Committee, and all other parties to the appeal, with reasonable advance notice that an expert will be called to give an opinion. The notice should include a brief statement of the expert’s qualifications and areas of expertise.

If a party intends to produce, at a hearing, a written statement or report prepared by an expert, a copy of the statement or report should be provided to the Committee and all parties to the appeal

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within a reasonable time before the statement or report is given in evidence. Unless there are compelling reasons for later admission, expert reports should be distributed 30 days prior to the hearing date.

## 13.3.3.12 Documents

If a party will be referring to a document that was not provided to the Committee and all parties prior to the hearing, sufficient copies of the document must be brought to the hearing for the Committee and all other parties.

## 13.3.4 Appealing the Appeals Subcommittee's Decision

If a party is not satisfied with the decision of the Region's Appeals Subcommittee's Decision, he or she can appeal that decision to the 700 MHz National Planning Oversight Committee.

## Section 14 – Certification by the Chairperson that Regional Planning Process was Open to the Public

Included in the summary of the minutes of each meeting shall be a listing of the ways in which the meetings were announced to all members and all possible interested parties. Minutes should include lists of all members, participants, and observers attending the meeting. Include a simple certification statement signed by Chairperson.

I hereby certify that all planning committee meetings, including subcommittee or executive committee meetings were open to the public.

Signed \_\_\_\_\_  
Region 43 Chairperson

Witnessed \_\_\_\_\_  
Region 43 Vice Chairperson

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## Appendix A – Table of Interoperability Channels

**Appendix A**  
**Table of Interoperability Channels**  
**For Specific Uses/Services<sup>1</sup>**  
**(Adopted by the FCC in the 4<sup>th</sup> MO&O, WT Docket 96-86 dated March 5, 2002)**

**Television Channels 63/64**  
**Note: Only Base Transmit Side of Channel Pairs is Shown**

CHANNEL SETS	DESCRIPTION	LABEL
<i>Channel 23 &amp; 24</i>	<i>General Public Safety Services (secondary trunked)</i>	<i>7GTAC05<sup>2</sup></i>
<i>Channel 103 &amp; 104</i>	<i>General Public Safety Services (secondary trunked)</i>	<i>7GTAC07</i>
<i>Channel 183 &amp; 184</i>	<i>General Public Safety Services (secondary trunked)</i>	<i>7GTAC09</i>
<i>Channel 263 &amp; 264</i>	<i>General Public Safety Services (secondary trunked)</i>	<i>7GTAC11</i>
Channel 39 & 40	Calling Channel	7CALLA
Channel 119 & 120	General Public Safety Service	7GTAC13
Channel 199 & 200	General Public Safety Service	7GTAC15
Channel 279 & 280	General Public Safety Service (Data Only <sup>3</sup> )	7DTAC17
Channel 63 & 64	Emergency Medical Service	7ETAC19
Channel 143 & 144	Fire Service	7FTAC21
Channel 223 & 224	Law Enforcement Service	7LTAC23
Channel 303 & 304	Mobile Repeater	7MTAC25
Channel 79 & 80	Emergency Medical Service	7ETAC27
Channel 159 & 160	Fire Service	7FTAC29
Channel 239 & 240	Law Enforcement Service	7LTAC31
Channel 319 & 320	Other Public Service	7OTAC33

*Trunking is permitted on the 4 channel sets indicated in italics. The two channels immediately below each of these channels are reserve channels that may be combined with these channels for trunking systems that use 25 kHz channel bandwidths.*

<sup>1</sup> Channel nomenclature and reserving specific channels for first responders (EMS, Fire & Law Enforcement) were subjects of Petitions for Reconsideration to the 4<sup>th</sup> Report & Order in Docket 96-86. While these Petitions were denied by the FCC for codification into its Rules, the FCC nonetheless recognized the importance of such standardization if it was implemented at the State and/or Region Level.

<sup>2</sup> Tactical channel numbering was started at "5" to avoid confusion with TAC 1 through TAC 4 in the 800 MHz NPSAPAC Band.

<sup>3</sup> Only ANSI/TIA/EIA 102 (Project 25) data standard compliant equipment is permitted to use the data channels.

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## Television Channels 68/69

Note: Only Base Transmit Side of Channel Pairs is Shown

CHANNEL SETS	DESCRIPTION	LABEL
<i>Channel 657 &amp; 658</i>	<i>General Public Safety Services (secondary trunked)</i>	<i>7GTAC35</i>
<i>Channel 737 &amp; 738</i>	<i>General Public Safety Services (secondary trunked)</i>	<i>7GTAC37</i>
<i>Channel 817 &amp; 818</i>	<i>General Public Safety Services (secondary trunked)</i>	<i>7GTAC39</i>
<i>Channel 897 &amp; 898</i>	<i>General Public Safety Services (secondary trunked)</i>	<i>7GTAC41</i>
Channel 681 & 682	Calling Channel	7CALLB
Channel 761 & 762	General Public Safety Service	7GTAC43
Channel 841 & 842	General Public Safety Service	7GTAC45
Channel 921 & 922	General Public Safety Service (Data Only <sup>2</sup> )	7DTAC47
Channel 641 & 642	Emergency Medical Service	7ETAC49
Channel 721 & 722	Fire Service	7FTAC51
Channel 801 & 802	Law Enforcement Service	7LTAC53
Channel 881 & 882	Mobile Repeater	7MTAC55
Channel 697 & 698	Emergency Medical Service	7ETAC57
Channel 777 & 778	Fire Service	7FTAC59
Channel 857 & 858	Law Enforcement Service	7LTAC61
Channel 937 & 938	Other Public Service	7OTAC63

*Trunking is permitted on the 4 channel sets indicated in italics. The two channels immediately below each of these channels are reserve channels that may be combined with these channels for trunking systems that use 25 kHz channel bandwidths.*

## Interoperability Channel Technical Parameters ANSI/TIA/EIA-102 (Project 25) Common Air Interface

Certain common Project 25 parameters need to be defined to ensure digital radios operating on the 700 MHz Interoperability Channels can communicate. This is analogous to defining the common CTCSS tone used on NPSPAC analog Interoperability channels.

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## Appendix B – Interoperability Channel MOU Template

### *On State Interoperability Executive Committee Letterhead*

TO: (signer of application and title)  
(agency name)

FROM: (name), State Interoperability Executive Committee Chairperson

DATE: (mm/dd/yyyy)

SUBJECT: Memorandum of Understanding for Operating on the 700 MHz Interoperability Channels

This memorandum of understanding (hereafter referred to as MOU) shall be attached to the application when submitting it. By virtue of signing and submitting the application and this MOU, (agency name) (hereafter referred to as APPLICANT) affirms its willingness to comply with the proper operation of the Interoperability (interoperability) channels as dictated by the State Interoperability Executive Committee (here after referred to as SIEC) as approved by the Federal Communications Commission (hereafter referred to as FCC) and by the conditions of this MOU.

The APPLICANT shall abide by the conditions of this MOU which are as follows:

- To operate by all applicable State, County, and City laws/ordinances.
- To utilize “plain language” for all transmissions.
- To monitor the Calling Channel(s) and coordinate the use of the Tactical Channels.
- To identify inappropriate use and mitigate the same from occurring in the future.
- To limit secondary Trunked operation to the interoperability channels specifically approved on the application and limited to channels listed below.
- To relinquish secondary Trunked operation of approved interoperability channels to requests for primary conventional access with same or higher priority.
- To mitigate contention for channels by exercising the Priority Levels identified in this MOU.

The preceding conditions are the primary, though not complete, requirements for operating in the interoperability channels. Refer to the Region Plan for the complete requirements list.

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Priority Levels:

1. Disaster or extreme emergency operation for mutual aid and interagency communications;
2. Emergency or urgent operation involving imminent danger to life or property;
3. Special event control, generally of a preplanned nature (including Task Force operations)
4. Single agency secondary communications (default priority).

To resolve contention within the same priority, the channel should go to the organization with the wider span of control/authority. This shall be determined by the State Interoperability Executive Committee or RPC for the operation or by the levels of authority/government identified in the contention.

For clarification purposes and an aid to operate as authorized, any fixed base or mobile relay stations identified on the license for temporary locations (FCC station class FBT or FB2T, respectively) shall remain within the licensed area of operation. Similarly, vehicular/mobile repeater stations (FCC station class MO3) shall remain within the licensed area of operation. Federal agencies are permitted access to interoperability channels only as authorized by 47 CFR 2.102 (c) & 2.103 and Part 7.12 of the NTIA Manual.

Any violation of this MOU, the Region Plan, or FCC Rule shall be addressed immediately. The first level of resolution shall be between the parties involved, next the State Interoperability Executive Committee or RPC, and finally the FCC.

### Secondary Trunked Channels<sup>4</sup>

7GTAC05 - Channel 23 & 24	7GTAC35 - Channel 657 & 658
7GTAC07 - Channel 103 & 104	7GTAC37 - Channel 737 & 738
7GTAC09 - Channel 183 & 184	7GTAC39 - Channel 817 & 818
7GTAC11 - Channel 263 & 264	7GTAC41 - Channel 897 & 898

(typed or printed name of authorized signer)

(authorized signer identified above and consistent with application)

(date)

(agency name)

(agency address)

(agency address)

(agency address)

(signer's phone)

(signer's email address, if available)

<sup>4</sup> As adopted by the FCC in the 4<sup>th</sup> MO&O, WT Docket 96-86 dated March 5, 2002.

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## Appendix C – Recommended Incident Command System

### Public Safety National Coordination Committee Interoperability Subcommittee

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#### Recommendation to the NCC Steering Committee concerning the use of the Incident Command System (ICS)

The Incident Command System (ICS), also increasingly known as the Incident Management System (IMS) has been implemented throughout the U.S. and Canadian public safety communities at all levels of government, as well as increasingly among private-sector participants. ICS is an overall incident management program designed for universal application by any public safety entity or group of entities. The objective of this paper is to provide an overview of the basic ICS structure with a focus on communications operations specifically, and to provide recommendations for the implementation of ICS to manage priority access to the 700 MHz band public safety interoperability spectrum. More specific guidelines will need to be addressed as part of the Regional Planning Process.

#### I. Background

ICS is a comprehensive, modular system designed to provide a systematic, flexible approach to coordinating resources and response to incidents of any size, type, or duration. Although now a comprehensive series of management guidelines designed for a variety of incidents requiring public safety involvement, ICS has its origination in the area of wildfire suppression, prompted by a disastrous series of fires in Southern California in 1970. The U. S. Forest Service thereafter undertook a five-year development effort that led to the design of the Fire-Fighting Resources of Southern California Organized for Potential Emergencies (FIREScope) system. ICS applications and users have proliferated since then. In 1980, the FIREScope plan made the transition into a national program called the National Interagency Incident Management System (NIIMS)<sup>1</sup>. At that time ICS became the backbone of a wider-based system for all federal 1 The FIREScope (NIIMS) ICS protocol and terminology became and effectively remain the baseline for all ICS programs. Virtually all ICS programs of any type or scope, and regardless of the size or function of the developing agency, incorporate NIIMS to some extent, and virtually all are consistent with NIIMS. Such programs either cite NIIMS directly, or else incorporate language taken directly from NIIMS. Specifically, the *Communications Unit* agencies with wildland fire management responsibilities. Over the past 20 years ICS has been incorporated into the emergency management plans of numerous other public safety agencies, at all levels of government, throughout North America. In its 1996 Final Report to the Federal Communications Commission (FCC) and the National Telecommunications and Information Administration addressing public safety requirements before 2010, the Public Safety Wireless Advisory Committee (PSWAC) Interoperability Subcommittee developed its communications needs assessment under the context of ICS.

Specifically, the PSWAC determined that ICS was an efficient method of incident command organization and therefore developed its communications recommendations with the expectation that ICS would be implemented by all public safety organizations.

#### II. Definitions

The ICS system has been incorporated into a growing number of operational variants or combinations based upon the specific mission or regional focus of the participating entities (e.g. seismic activity, wildfires, large crowds or demonstrations). Such variants include, but are by no means limited to, those developed and/or currently employed by the California Office of Emergency Services (OES), The University of Michigan at Flint (UM-Flint), National Interagency Fire Center (NIFC), the National Wildfire Coordinating Group (NWCG), Federal Emergency Management Agency (FEMA), and Search and Rescue of British Columbia (SARBC). Accordingly, several different ICS training programs have been developed, such as those currently offered by the National Fire Academy (NFA), Emergency Management Institute (EMI) the Standardized Emergency Management System (SEMS), and the NIIMS. In developing these recommendations, ICS publications either contained in or referenced by the NFA training curriculum were employed as a “baseline” reference. However, in regard to the basic structure and

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terminology, all ICS/IMS programs, including the NFA curriculum, are essentially derived from the original FIRESCOPE model, and thus are substantially consistent.

For the purposes of developing these recommendations, with the exception of the specific communications protocols addressed herein, “ICS” will therefore be used to apply to a generic version of the ICS/IMS management structure, which is generally applicable to all agencies currently employing ICS without regard to specifics developed for a particular purpose, location or focus.

### III. Overview

The complexity of incident management, coupled with the growing need for multi-agency and multifunctional involvement on incidents, has increased the need for a single standard incident management system that can be used by all emergency response disciplines.

ICS serves as a management system designed to help mitigate incident risks by providing clear lines of authority, accurate information, strict accountability, planning, and cost-effective operations and logistical support for any incident. An ICS plan can focus on law enforcement, fire suppression, emergency medical services (EMS), or any combination thereof to whatever degree is required. Either individual or multiple agencies can use ICS—and participating entities or assets can be added, augmented, scaled back or dropped entirely at any time prior to or during the incident—either within an individual jurisdiction, or across multiple jurisdictions or regions. This internal flexibility affords both immediate and long-term efficiencies.

ICS can be applied to a wide variety of emergency and non-emergency situations. Some examples of incidents and events that can use ICS include:

- Fires, HAZMAT, and multicasualty incidents
- Multijurisdiction and multi-agency disasters
- Wide-area search and rescue missions
- Planned events; e.g., celebrations, parades, concerts

The key element of ICS is that only one individual will be vested with a particular command and control action, and all command and control functions will ultimately be derived from one central authority.

ICS is organized around five major management activities. *Command* has overall responsibility at the incident or event. It determines objectives and establishes priorities based on the nature of the incident, available resources and agency policy. *Operations* develops the tactical organization and directs all resources to carry out the Incident Action Plan. *Planning* develops the Incident Action Plan to accomplish the objectives. It also collects and evaluates information and maintains status of assigned resources and functions. *Logistics* provides resources and all other services needed to support the organization, to include the coordination and implementation of communications functions. *Finance/Administration* monitors costs related to the incident, provides accounting, procurement, time recording, cost analysis, and overall fiscal guidance. These five major management activities are the foundation upon which the ICS organization is based, and are applicable to any ICS program or incident regardless of size or type.

The person designated with overall management authority is the Incident Commander (IC). The IC may manage all or part of the five major activities directly, or may opt to delegate such functions as required along the same lines of authority. A basic ICS operating guideline is that the IC is responsible until specific authority is transferred or delegated to another person. Large incidents usually require each of these activities to be established as separate sections within the organization, with appropriate delegation of authority from the IC to specific subordinate positions. Each of the primary ICS sections may be further sub-divided within their original structure as needed, again, while maintaining a clear flow of authorization directly to and from the IC. The IC will thereby determine if the specific incident requires the use of all sections and the staffing and resources to be allocated to a particular section. Regardless of the number of additional subordinate “layers,” as with the IC, responsibility is passed to and held by the designated individual(s) until either transferred to a relief, delegated to a subordinate, or until the incident is concluded altogether.

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Facilities will be established depending on the kind and complexity of the incident or event, with standard terminology applied to the principal ICS facilities. These include *Incident Command Post (ICP)*, which serves as the “hub” of all command and control functions, to include communications, and from which the IC normally oversees all incident operations. There is only one ICP for each incident and every incident must have some form of an ICP. Other locations are established according to need: *Staging Areas* are locations at which resources are kept while awaiting incident assignment. Most large incidents will have a staging area, and some incidents may have several. The *Base* is a location at the incident at which primary service and support activities are performed. *Camps* are incident locations where resources may be kept to support incident operations. Camps differ from Staging Areas in that essential support operations are done at Camps, and resources at Camps are not always immediately available for use. The *Helibase* is a location in and around an incident area at which helicopters may be parked, maintained, fueled, and equipped for incident operations. *Helispots* are temporary locations where helicopters can land and load and off-load personnel, equipment, and supplies. Any number of additional or alternative sites (e.g. medical support, dining and sanitary facilities) may be designated in accordance with a predetermined ICS plan, or as determined by the IC.

Each incident will also have an oral or written Incident Action Plan. The purpose of the plan is to provide all incident supervisory personnel with direction for future actions. Action plans that include the measurable tactical operations to be achieved are always prepared around a time frame called an Operational Period.

Operational Periods can be of various lengths, but should be no longer than twenty-four hours. The planning for an operational period must be done far enough in advance to ensure those registered resources are available when the Operational Period begins.

## IV. ICS Communications Infrastructure

Centrally managed, interoperable communications are essential for virtually every aspect of the ICS structure to function. Communications to be used at the incident site require advance planning, to include the development of frequency inventories, frequency sharing agreements, use of synthesized mobile / portable radio equipment, and the use of available local, state and federal communications equipment, all of which will be combined as part of the available ICS infrastructure. It is anticipated that the RPCs, with the advice and support of the State Interoperability Executive Committees (SIEC), will be pivotal in addressing these areas as part of an overall ICS communications plan.

Communications during ICS incidents of any size are managed through the use of an incident communications center and a communications plan established for the use of command as well as tactical and support resources assigned to the incident.

Many local governments, whether participating in ICS plans or not, have established Emergency Operations Centers (EOCs), which can be activated quickly to facilitate centralized command and control during incident response. When a local government EOC is activated, SEMS regulations require the establishment of communication and coordination between the IC and the department operations center of the EOC, or the EOC itself, and also between the EOC and any state or local jurisdiction(s) having authority within the incident’s boundaries.

ICS field response organizations will normally communicate with the local government level (either department operating centers or EOCs) through dispatch centers. Dispatch centers will not have command authority over incidents, but will act as directed by the IC or other designated authority in accordance with agency or jurisdiction policy, or as specifically delineated within the applicable ICS plan. Because of the potential number and diversity of communications systems involved, agency dispatch centers will often function in an intermediate role between IC, personnel in the field, and department operations centers or EOCs. Also, in some cases under heavy load conditions, agencies may elect to move into an “expanded dispatch” mode, which may involve the delegation of a higher level of authority at the agency dispatch facility.

Dispatch centers may be departmental or may be centralized within the jurisdiction. Some jurisdictions have the capability to go from departmental dispatching to centralized dispatching when the local government EOC is activated. The jurisdiction’s dispatching arrangements and communication capability along with local policy will affect how operations are linked to the local government level.

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In many jurisdictions, the ICS field response organizations will be primarily linked via the dispatch center(s) to the department operations center (DOC) of the agency that has jurisdiction over the incident. In these cases, DOCs have agency level authority over the assigned IC. The DOC is responsible for coordinating with the local government EOC. Alternatively, in some jurisdictions, ICS field response organizations may have direct communications with and/or receive policy direction from the local government EOC when it is activated. Whether this occurs, along with other possible operational variations consistent with the overall ICS management scheme, will depend on the size and policy of the jurisdiction, and the lines of communications that are available.

## V. Plain Language Usage

It should be emphasized that, under ICS communications guidelines, plain language is to be used at all times.

## VI. ICS Communications Management

As noted above, ICS Communications are organized as a component of the Logistics branch. The Communications Unit Leader, as detailed in the Communications Unit Leader Position Manual (ICS 223–5, originally developed by FIREScope) is therefore under the direction of the Service Branch Director or Logistics Section Chief, who in turn report directly to the IC. The Communications Unit Leader is responsible for developing plans for the effective use of incident communications equipment and facilities; installing and testing of communications equipment; supervision of the incident communications center; distribution of communications equipment to incident personnel; and the maintenance and repair of communications equipment.

The Communications Unit Leader's specific responsibilities include, but are not necessarily limited to:

- Obtain a briefing from the Service Branch OIC or Logistics OIC
- Determine Communications unit personnel needs
- Advise on communication capabilities and limitations
- Prepare and implement the Incident Radio Communications Plan
- Ensure that the Incident Communications Center and Message Center are established as necessary
- Set up LMR/CMR, telephone and public address systems as necessary
- Establish appropriate communications distribution and maintenance locations within or adjacent to the ICP, at the base(s) or in remote locations (e.g. camps, helispots)
- Ensure communications systems are installed, tested, and repaired as necessary
- Ensure an equipment accountability system is established and maintained
- Ensure personal portable radio equipment is distributed per the Incident Control Radio Plan with consideration to battery replacement or recharging
- Provide technical information as required concerning:
  - Adequacy of communications systems currently in operation
  - Geographic limitation on communications systems
  - Equipment capabilities
  - Amount and type of equipment available
  - Anticipated problems and shortfalls concerning the use of communications equipment
- Supervise all Communication Unit activities
- Maintain records relating to the communications equipment as appropriate, to include channel settings on programmable radios
- Receive equipment from relieved or released units and reassign as necessary
- Maintain the Communications Unit Log

As with every other aspect of ICS, the Communications Unit Leader is allowed a considerable amount of discretion regarding the set-up and utilization of the specific communications network and individual elements within it. However, on some basis, the Communications Unit Leader, either directly or through the Head Dispatcher (if multiple dispatchers are used), or Incident Dispatcher (if a single dispatcher is used), will directly manage the use and prioritization of communications channels. This individual's specific duties include, but are not necessarily limited to:

- Obtain a briefing from the Communications Unit Leader

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- Determine
  - Location of assignment
  - Communications procedures
  - Frequencies in use
  - Nets established or to be established
  - Equipment status
  - Capabilities, limitation and restrictions
  - Location of repeaters
  - Message center problems
- Ensure adequate communications center staffing levels as appropriate
- Obtain and review the Incident Action Plan to determine the incident organization and Communications Plan
- Set up the Communications Center, check out and test equipment
- Request servicing or replacement of any inoperative or marginal equipment
- Set up message center location as required
- Receive and transmit messages within and external to the incident
- Maintain files or Status Changes and General Messages
- Maintain a record of unusual incident occurrences affecting or potentially affecting communications
- Provide a briefing to relief on
  - Current activities
  - Equipment status
  - Any unusual communications situations
- Turn in appropriate documents to Communications Unit Leader
- Stand down / demobilize the Communications Center in accordance with the ICS
- Incident Demobilization Plan
- Maintain radio traffic logs

In addition to, or as a component of, the previously described positions, the Emergency Communications Coordinator (ECC) is responsible for emergency warnings and communications. Dispatcher(s) shall perform this function at the direction of the IC or the Communications Unit Leader, if applicable. The primary responsibilities of the ECC include:

- Activating the on site warning and instructional systems as directed by the IC
- Establishing communication links between the ICP and public news and information agencies
- Establishing a message control system for logging messages received by and dispatched from the IC and/or the ICP
- Maintaining primary and backup communications systems between the IC, the ICP, various responding personnel, departments on site and the local emergency management agencies, as directed by the IC or appropriate authority
- Receiving and disseminating information to appropriate individuals

As a component of directly overseeing the operation of the communications network, the Communications Unit Leader directly, or through the ECC, Lead or Incident Dispatcher(s), or some other position within the Communications Unit specifically delegated as such will be tasked with monitoring, assigning, and prioritizing the use of all radio communications channels, to include interoperability channels, in accordance with the Priority Access Levels discussed below. As with every other ICS position, the person tasked with channel management (“Channel Manager”) would have sole discretionary authority delegated through as many steps as necessary, but deriving directly from the IC.

## VII. The ICS Communications Plan

The ICS Incident Radio Communications Plan is intended to provide documentation of all pertinent information concerning all radio frequency assignment, in one centralized and accessible location, for each operational period. The plan is a summary of information obtained from the Radio Requirements Worksheet (ICS Form 216), and the Radio Frequency Assignment Worksheet (ICS Form 217). Information from the Radio Communications Plan on Frequency Assignment is normally placed on the appropriate Assignment List (ICS Form 204). At a minimum, the

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Incident Radio Communications Plan must delineate the Basic Radio Channel Utilization System/Cache, Channel(s) utilized, function, frequency, and assignment. Detailed instructions regarding preparing the above forms may be found in ICS 223–5 discussed previously.

## **VIII. Calling Channel Monitoring**

It is implicit in the development of an ICS plan that all participating entities will monitor the calling channels for the 700 MHz interoperability spectrum on a 24–hour basis as already recommended by the NCC for incorporation into the FCC Rules for the 700 MHz band as per the National Public Safety Planning Advisory Committee (NPSPAC) guidelines.

## **IX. Priority Access Levels**

The NCC has recommended the FCC mandate priority access for users in critical situations only. During incidents where Priority Access has been initiated, the Channel Manager would assign channels through the calling channel based on priority. The NCC suggested the following priorities from highest to lowest:

- Level 1—Disaster and extreme emergency operations for mutual aid and interagency communications
- Level 2—Emergency or urgent operations involving imminent danger to life or property
- Level 3—Special event control, generally preplanned (including task force operations)
- Level 4—Single agency secondary communications (default priority)

In such cases where a higher priority party would require access to the channel, the Channel Manager would be authorized to restrict access to lower–priority users, or to direct any lower priority party already using the channel to cease communications to the extent necessary until such time as that party could be reassigned subsequent to the clearing of a channel by a higher priority user. Such restrictions could be imposed at any time, and for any duration required, up until the incident is concluded and the control of the interoperable spectrum is returned to the Regional Planning Committee (RPC) or other non–emergency channel management authority.

## **X. Regional ICS Planning**

One of the major features of ICS is its inherent flexibility to meet the needs of any size or number of organizations, and any type of incident. It is expected that each RPC, with the support of its SIEC, will assist in the development and implementation of a specific ICS plan or plans for that region in accordance with these guidelines and within the scope of the functions already recommended by the NCC for these entities.

## **XI. Conclusions**

1. ICS is a sound concept that has a proven track record of success over more than 30 years of development throughout North America.
2. ICS allows users to effectively manage and combat incidents by providing a simple and consistent organizational plan that is full scalable and applicable to any size or type of emergency or non–emergency incident requiring the support of public safety entities.
3. ICS is already available in a variety of regionally or functionally oriented training curriculums, and can be adapted to existing emergency management infrastructure.
4. ICS is inherently simple, and can be learned by both operational and management personnel, and implemented quickly.
5. Because of its flexibility, ICS would be effective for any public safety agency regardless of size or mission.
6. ICS can provide significant benefit when used by public safety agencies to manage priority access to the interoperability spectrum, or as a component of a new or existing Incident Radio Communications Plan.

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7. In accordance with ICS guidelines, the position of Channel Manager or equivalent authority needs to be established as an individual position, or otherwise incorporated as a specifically delegated component of the Communications Unit Leader, ECC, Head/Incident Dispatcher, or other clearly defined position.

## **XII. Recommendations**

1. It is this Subcommittee's recommendation that the NCC advise the FCC to mandate the use of standard ICS nomenclature (e.g. as adopted by FEMA and others) in the use of the ICS System.

2. It is this Subcommittee's recommendation that the NCC advise the FCC to mandate the use of the standard ICS structure (e.g. as adopted by FEMA and others) in the use of the ICS System.

3. It is this Subcommittee's recommendation that the NCC advise the FCC that plain language be used at all times for ICS communications.

4. It is this Subcommittee's recommendation that the NCC advise the FCC that the Communications Unit Leader position be required when an incident is multijurisdictional or requires more than one working channel (i.e. in addition to the calling channel).

5. It is this Subcommittee's recommendation that the NCC advise the FCC that the use of priority access protocols be required for all ICS communications plans.

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Appendix D – Region 43 RPC Meetings

Appendix E – Region 43 RPC Membership and Meeting Attendance

Appendix F – Region 43 Listserver Members

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## Appendix G – Channel Block Assignments by County

11/18/03

### Region 43 - Washington Detailed Channel Allotments by Area

Area Name	Channel	Class	Base Freq	Mobile Freq
Adams	337-340	General Use	766.112500	796.112500
	413-416	General Use	766.587500	796.587500
	469-472	General Use	766.937500	796.937500
	525-528	General Use	773.287500	803.287500
	613-616	General Use	773.837500	803.837500
	829-832	General Use	775.187500	805.187500
	913-916	General Use	775.712500	805.712500
Asotin	161-164	General Use	765.012500	795.012500
	209-212	General Use	765.312500	795.312500
	281-284	General Use	765.762500	795.762500
	337-340	General Use	766.112500	796.112500
	385-388	General Use	766.412500	796.412500
	445-448	General Use	766.787500	796.787500
	501-504	General Use	773.137500	803.137500
	569-572	General Use	773.562500	803.562500
	617-620	General Use	773.862500	803.862500
	705-708	General Use	774.412500	804.412500
	825-828	General Use	775.162500	805.162500
	873-876	General Use	775.462500	805.462500
	913-916	General Use	775.712500	805.712500
Benton	41-44	General Use	764.262500	794.262500
	81-84	General Use	764.512500	794.512500
	121-124	General Use	764.762500	794.762500
	161-164	General Use	765.012500	795.012500
	217-220	General Use	765.362500	795.362500
	257-260	General Use	765.612500	795.612500
	297-300	General Use	765.862500	795.862500
	357-360	General Use	766.237500	796.237500
	405-408	General Use	766.537500	796.537500
	445-448	General Use	766.787500	796.787500
	497-500	General Use	773.112500	803.112500
	537-540	General Use	773.362500	803.362500
	589-592	General Use	773.687500	803.687500
	661-664	General Use	774.137500	804.137500
	717-720	General Use	774.487500	804.487500
	757-760	General Use	774.737500	804.737500
	821-824	General Use	775.137500	805.137500
	861-864	General Use	775.387500	805.387500
	901-904	General Use	775.637500	805.637500
	945-948	General Use	775.912500	805.912500
Chelan	57-60	General Use	764.362500	794.362500
	97-100	General Use	764.612500	794.612500
	333-336	General Use	766.087500	796.087500
	373-376	General Use	766.337500	796.337500
	413-416	General Use	766.587500	796.587500

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	501-504	General Use	773.137500	803.137500
	561-564	General Use	773.512500	803.512500
	601-604	General Use	773.762500	803.762500
	829-832	General Use	775.187500	805.187500
	869-872	General Use	775.437500	805.437500
Clallam	129-132	General Use	764.812500	794.812500
	169-172	General Use	765.062500	795.062500
	245-248	General Use	765.537500	795.537500
	329-332	General Use	766.062500	796.062500
	377-380	General Use	766.362500	796.362500
	433-436	General Use	766.712500	796.712500
	473-476	General Use	766.962500	796.962500
	485-488	General Use	773.037500	803.037500
	561-564	General Use	773.512500	803.512500
	601-604	General Use	773.762500	803.762500
	673-676	General Use	774.212500	804.212500
	825-828	General Use	775.162500	805.162500
	865-868	General Use	775.412500	805.412500
	909-912	General Use	775.687500	805.687500
Clark	121-124	General Use	764.762500	794.762500
	281-284	General Use	765.762500	795.762500
	333-336	General Use	766.087500	796.087500
	373-376	General Use	766.337500	796.337500
	413-416	General Use	766.587500	796.587500
	457-460	General Use	766.862500	796.862500
	497-500	General Use	773.112500	803.112500
	561-564	General Use	773.512500	803.512500
	633-636	General Use	773.962500	803.962500
	749-752	General Use	774.687500	804.687500
	833-836	General Use	775.212500	805.212500
	873-876	General Use	775.462500	805.462500
Columbia	129-132	General Use	764.812500	794.812500
	321-324	General Use	766.012500	796.012500
	369-372	General Use	766.312500	796.312500
	409-412	General Use	766.562500	796.562500
	521-524	General Use	773.262500	803.262500
	941-944	General Use	775.887500	805.887500
Cowlitz	17-20	General Use	764.112500	794.112500
	241-244	General Use	765.512500	795.512500
	385-388	General Use	766.412500	796.412500
	449-452	General Use	766.812500	796.812500
	485-488	General Use	773.037500	803.037500
	525-528	General Use	773.287500	803.287500
	581-584	General Use	773.637500	803.637500
	673-676	General Use	774.212500	804.212500
	713-716	General Use	774.462500	804.462500
	793-796	General Use	774.962500	804.962500
	913-916	General Use	775.712500	805.712500
Douglas	125-128	General Use	764.787500	794.787500
	165-168	General Use	765.037500	795.037500
	341-344	General Use	766.137500	796.137500
	401-404	General Use	766.512500	796.512500

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	465-468	General Use	766.912500	796.912500
	529-532	General Use	773.312500	803.312500
	621-624	General Use	773.887500	803.887500
	701-704	General Use	774.387500	804.387500
	749-752	General Use	774.687500	804.687500
	941-944	General Use	775.887500	805.887500
Ferry	17-20	General Use	764.112500	794.112500
	289-292	General Use	765.812500	795.812500
	349-352	General Use	766.187500	796.187500
	417-420	General Use	766.612500	796.612500
	457-460	General Use	766.862500	796.862500
	505-508	General Use	773.162500	803.162500
	561-564	General Use	773.512500	803.512500
	609-612	General Use	773.812500	803.812500
	661-664	General Use	774.137500	804.137500
	717-720	General Use	774.487500	804.487500
	825-828	General Use	775.162500	805.162500
	901-904	General Use	775.637500	805.637500
Franklin	13-16	General Use	764.087500	794.087500
	173-176	General Use	765.087500	795.087500
	345-348	General Use	766.162500	796.162500
	393-396	General Use	766.462500	796.462500
	437-440	General Use	766.737500	796.737500
	489-492	General Use	773.062500	803.062500
	565-568	General Use	773.537500	803.537500
	605-608	General Use	773.787500	803.787500
	677-680	General Use	774.237500	804.237500
	741-744	General Use	774.637500	804.637500
	793-796	General Use	774.962500	804.962500
	869-872	General Use	775.437500	805.437500
Garfield	53-56	General Use	764.337500	794.337500
	241-244	General Use	765.512500	795.512500
	329-332	General Use	766.062500	796.062500
	429-432	General Use	766.687500	796.687500
	493-496	General Use	773.087500	803.087500
	577-580	General Use	773.612500	803.612500
	865-868	General Use	775.412500	805.412500
Grant	49-52	General Use	764.312500	794.312500
	89-92	General Use	764.562500	794.562500
	137-140	General Use	764.862500	794.862500
	201-204	General Use	765.262500	795.262500
	241-244	General Use	765.512500	795.512500
	281-284	General Use	765.762500	795.762500
	321-324	General Use	766.012500	796.012500
	381-384	General Use	766.387500	796.387500
	425-428	General Use	766.662500	796.662500
	477-480	General Use	766.987500	796.987500
	481-484	General Use	773.012500	803.012500
	549-552	General Use	773.437500	803.437500
	629-632	General Use	773.937500	803.937500
	669-672	General Use	774.187500	804.187500
	709-712	General Use	774.437500	804.437500
	781-784	General Use	774.887500	804.887500

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	837-840	General Use	775.237500	805.237500
	877-880	General Use	775.487500	805.487500
Grays Harbor	57-60	General Use	764.362500	794.362500
	97-100	General Use	764.612500	794.612500
	173-176	General Use	765.087500	795.087500
	213-216	General Use	765.337500	795.337500
	253-256	General Use	765.587500	795.587500
	293-296	General Use	765.837500	795.837500
	345-348	General Use	766.162500	796.162500
	429-432	General Use	766.687500	796.687500
	509-512	General Use	773.187500	803.187500
	553-556	General Use	773.462500	803.462500
	593-596	General Use	773.712500	803.712500
	633-636	General Use	773.962500	803.962500
	873-876	General Use	775.462500	805.462500
Island	205-208	General Use	765.287500	795.287500
	285-288	General Use	765.787500	795.787500
	357-360	General Use	766.237500	796.237500
	409-412	General Use	766.562500	796.562500
	449-452	General Use	766.812500	796.812500
	509-512	General Use	773.187500	803.187500
	557-560	General Use	773.487500	803.487500
	597-600	General Use	773.737500	803.737500
	637-640	General Use	773.987500	803.987500
	785-788	General Use	774.912500	804.912500
Jefferson	49-52	General Use	764.312500	794.312500
	365-368	General Use	766.287500	796.287500
	441-444	General Use	766.762500	796.762500
	501-504	General Use	773.137500	803.137500
	545-548	General Use	773.412500	803.412500
	585-588	General Use	773.662500	803.662500
	625-628	General Use	773.912500	803.912500
	713-716	General Use	774.462500	804.462500
King	41-44	General Use	764.262500	794.262500
	81-84	General Use	764.512500	794.512500
	121-124	General Use	764.762500	794.762500
	161-164	General Use	765.012500	795.012500
	201-204	General Use	765.262500	795.262500
	241-244	General Use	765.512500	795.512500
	281-284	General Use	765.762500	795.762500
	321-324	General Use	766.012500	796.012500
	361-364	General Use	766.262500	796.262500
	405-408	General Use	766.537500	796.537500
	477-480	General Use	766.987500	796.987500
	481-484	General Use	773.012500	803.012500
	541-544	General Use	773.387500	803.387500
	581-584	General Use	773.637500	803.637500
	621-624	General Use	773.887500	803.887500
	661-664	General Use	774.137500	804.137500
	701-704	General Use	774.387500	804.387500
	741-744	General Use	774.637500	804.637500
	781-784	General Use	774.887500	804.887500
	821-824	General Use	775.137500	805.137500

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	861-864	General Use	775.387500	805.387500
	901-904	General Use	775.637500	805.637500
	945-948	General Use	775.912500	805.912500
Kitsap	333-336	General Use	766.087500	796.087500
	373-376	General Use	766.337500	796.337500
	421-424	General Use	766.637500	796.637500
	525-528	General Use	773.287500	803.287500
	565-568	General Use	773.537500	803.537500
	605-608	General Use	773.787500	803.787500
	829-832	General Use	775.187500	805.187500
	869-872	General Use	775.437500	805.437500
Kittitas	349-352	General Use	766.187500	796.187500
	389-392	General Use	766.437500	796.437500
	453-456	General Use	766.837500	796.837500
	521-524	General Use	773.262500	803.262500
	569-572	General Use	773.562500	803.562500
	609-612	General Use	773.812500	803.812500
	789-792	General Use	774.937500	804.937500
Klickitat	49-52	General Use	764.312500	794.312500
	337-340	General Use	766.112500	796.112500
	377-380	General Use	766.362500	796.362500
	425-428	General Use	766.662500	796.662500
	469-472	General Use	766.937500	796.937500
	545-548	General Use	773.412500	803.412500
	705-708	General Use	774.412500	804.412500
	829-832	General Use	775.187500	805.187500
Lewis	357-360	General Use	766.237500	796.237500
	409-412	General Use	766.562500	796.562500
	473-476	General Use	766.962500	796.962500
	517-520	General Use	773.237500	803.237500
	573-576	General Use	773.587500	803.587500
	613-616	General Use	773.837500	803.837500
	745-748	General Use	774.662500	804.662500
	785-788	General Use	774.912500	804.912500
	837-840	General Use	775.237500	805.237500
	941-944	General Use	775.887500	805.887500
Lincoln	373-376	General Use	766.337500	796.337500
	433-436	General Use	766.712500	796.712500
	493-496	General Use	773.087500	803.087500
	577-580	General Use	773.612500	803.612500
	789-792	General Use	774.937500	804.937500
Mason	353-356	General Use	766.212500	796.212500
	397-400	General Use	766.487500	796.487500
	457-460	General Use	766.862500	796.862500
	533-536	General Use	773.337500	803.337500
	577-580	General Use	773.612500	803.612500
	617-620	General Use	773.862500	803.862500
	749-752	General Use	774.687500	804.687500
Okanogan	177-180	General Use	765.112500	795.112500
	217-220	General Use	765.362500	795.362500

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	257-260	General Use	765.612500	795.612500
	297-300	General Use	765.862500	795.862500
	365-368	General Use	766.287500	796.287500
	445-448	General Use	766.787500	796.787500
	537-540	General Use	773.362500	803.362500
	637-640	General Use	773.987500	803.987500
	757-760	General Use	774.737500	804.737500
	797-800	General Use	774.987500	804.987500
	917-920	General Use	775.737500	805.737500
Pacific	89-92	General Use	764.562500	794.562500
	161-164	General Use	765.012500	795.012500
	321-324	General Use	766.012500	796.012500
	369-372	General Use	766.312500	796.312500
	421-424	General Use	766.637500	796.637500
	461-464	General Use	766.887500	796.887500
	493-496	General Use	773.087500	803.087500
	565-568	General Use	773.537500	803.537500
	605-608	General Use	773.787500	803.787500
	669-672	General Use	774.187500	804.187500
	709-712	General Use	774.437500	804.437500
	821-824	General Use	775.137500	805.137500
	901-904	General Use	775.637500	805.637500
Pend Oreille	333-336	General Use	766.087500	796.087500
	377-380	General Use	766.362500	796.362500
	421-424	General Use	766.637500	796.637500
	509-512	General Use	773.187500	803.187500
	549-552	General Use	773.437500	803.437500
	605-608	General Use	773.787500	803.787500
Pierce	13-16	General Use	764.087500	794.087500
	53-56	General Use	764.337500	794.337500
	93-96	General Use	764.587500	794.587500
	137-140	General Use	764.862500	794.862500
	177-180	General Use	765.112500	795.112500
	217-220	General Use	765.362500	795.362500
	257-260	General Use	765.612500	795.612500
	297-300	General Use	765.862500	795.862500
	341-344	General Use	766.137500	796.137500
	381-384	General Use	766.387500	796.387500
	445-448	General Use	766.787500	796.787500
	489-492	General Use	773.062500	803.062500
	549-552	General Use	773.437500	803.437500
	589-592	General Use	773.687500	803.687500
	629-632	General Use	773.937500	803.937500
	677-680	General Use	774.237500	804.237500
	717-720	General Use	774.487500	804.487500
	757-760	General Use	774.737500	804.737500
	797-800	General Use	774.987500	804.987500
	877-880	General Use	775.487500	805.487500
	917-920	General Use	775.737500	805.737500
San Juan	53-56	General Use	764.337500	794.337500
	97-100	General Use	764.612500	794.612500
	177-180	General Use	765.112500	795.112500
	217-220	General Use	765.362500	795.362500

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	257-260	General Use	765.612500	795.612500
	297-300	General Use	765.862500	795.862500
	337-340	General Use	766.112500	796.112500
	381-384	General Use	766.387500	796.387500
	425-428	General Use	766.662500	796.662500
	465-468	General Use	766.912500	796.912500
	529-532	General Use	773.312500	803.312500
	569-572	General Use	773.562500	803.562500
	609-612	General Use	773.812500	803.812500
	757-760	General Use	774.737500	804.737500
	797-800	General Use	774.987500	804.987500
	917-920	General Use	775.737500	805.737500
Skagit	45-48	General Use	764.287500	794.287500
	125-128	General Use	764.787500	794.787500
	165-168	General Use	765.037500	795.037500
	325-328	General Use	766.037500	796.037500
	393-396	General Use	766.462500	796.462500
	437-440	General Use	766.737500	796.737500
	489-492	General Use	773.062500	803.062500
	549-552	General Use	773.437500	803.437500
	589-592	General Use	773.687500	803.687500
	629-632	General Use	773.937500	803.937500
	677-680	General Use	774.237500	804.237500
	717-720	General Use	774.487500	804.487500
	905-908	General Use	775.662500	805.662500
Skamania	201-204	General Use	765.262500	795.262500
	345-348	General Use	766.162500	796.162500
	533-536	General Use	773.337500	803.337500
	621-624	General Use	773.887500	803.887500
	861-864	General Use	775.387500	805.387500
Snohomish	17-20	General Use	764.112500	794.112500
	89-92	General Use	764.562500	794.562500
	133-136	General Use	764.837500	794.837500
	173-176	General Use	765.087500	795.087500
	213-216	General Use	765.337500	795.337500
	253-256	General Use	765.587500	795.587500
	293-296	General Use	765.837500	795.837500
	345-348	General Use	766.162500	796.162500
	385-388	General Use	766.412500	796.412500
	429-432	General Use	766.687500	796.687500
	469-472	General Use	766.937500	796.937500
	517-520	General Use	773.237500	803.237500
	573-576	General Use	773.587500	803.587500
	613-616	General Use	773.837500	803.837500
	669-672	General Use	774.187500	804.187500
	709-712	General Use	774.437500	804.437500
	753-756	General Use	774.712500	804.712500
	793-796	General Use	774.962500	804.962500
	837-840	General Use	775.237500	805.237500
	913-916	General Use	775.712500	805.712500
Spokane	13-16	General Use	764.087500	794.087500
	53-56	General Use	764.337500	794.337500
	97-100	General Use	764.612500	794.612500

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	161-164	General Use	765.012500	795.012500
	201-204	General Use	765.262500	795.262500
	241-244	General Use	765.512500	795.512500
	281-284	General Use	765.762500	795.762500
	345-348	General Use	766.162500	796.162500
	389-392	General Use	766.437500	796.437500
	441-444	General Use	766.762500	796.762500
	517-520	General Use	773.237500	803.237500
	557-560	General Use	773.487500	803.487500
	597-600	General Use	773.737500	803.737500
	637-640	General Use	773.987500	803.987500
	713-716	General Use	774.462500	804.462500
	781-784	General Use	774.887500	804.887500
	821-824	General Use	775.137500	805.137500
	865-868	General Use	775.412500	805.412500
	905-908	General Use	775.662500	805.662500
	945-948	General Use	775.912500	805.912500
Stevens	85-88	General Use	764.537500	794.537500
	133-136	General Use	764.837500	794.837500
	173-176	General Use	765.087500	795.087500
	213-216	General Use	765.337500	795.337500
	253-256	General Use	765.587500	795.587500
	325-328	General Use	766.037500	796.037500
	409-412	General Use	766.562500	796.562500
	449-452	General Use	766.812500	796.812500
	485-488	General Use	773.037500	803.037500
	569-572	General Use	773.562500	803.562500
	617-620	General Use	773.862500	803.862500
	673-676	General Use	774.212500	804.212500
	741-744	General Use	774.637500	804.637500
	833-836	General Use	775.212500	805.212500
	873-876	General Use	775.462500	805.462500
Thurston	45-48	General Use	764.287500	794.287500
	85-88	General Use	764.537500	794.537500
	125-128	General Use	764.787500	794.787500
	165-168	General Use	765.037500	795.037500
	205-208	General Use	765.287500	795.287500
	245-248	General Use	765.537500	795.537500
	285-288	General Use	765.787500	795.787500
	325-328	General Use	766.037500	796.037500
	389-392	General Use	766.437500	796.437500
	465-468	General Use	766.912500	796.912500
	497-500	General Use	773.112500	803.112500
	561-564	General Use	773.512500	803.512500
	601-604	General Use	773.762500	803.762500
	665-668	General Use	774.162500	804.162500
	705-708	General Use	774.412500	804.412500
	825-828	General Use	775.162500	805.162500
	865-868	General Use	775.412500	805.412500
	905-908	General Use	775.662500	805.662500
Wahkiakum	49-52	General Use	764.312500	794.312500
	209-212	General Use	765.312500	795.312500
	329-332	General Use	766.062500	796.062500
	433-436	General Use	766.712500	796.712500

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	505-508	General Use	773.162500	803.162500
	545-548	General Use	773.412500	803.412500
	597-600	General Use	773.737500	803.737500
	637-640	General Use	773.987500	803.987500
	869-872	General Use	775.437500	805.437500
Walla Walla	205-208	General Use	765.287500	795.287500
	285-288	General Use	765.787500	795.787500
	333-336	General Use	766.087500	796.087500
	377-380	General Use	766.362500	796.362500
	421-424	General Use	766.637500	796.637500
	465-468	General Use	766.912500	796.912500
	505-508	General Use	773.162500	803.162500
	545-548	General Use	773.412500	803.412500
	621-624	General Use	773.887500	803.887500
	701-704	General Use	774.387500	804.387500
	785-788	General Use	774.912500	804.912500
	833-836	General Use	775.212500	805.212500
	917-920	General Use	775.737500	805.737500
Whatcom	13-16	General Use	764.087500	794.087500
	85-88	General Use	764.537500	794.537500
	137-140	General Use	764.862500	794.862500
	209-212	General Use	765.312500	795.312500
	249-252	General Use	765.562500	795.562500
	289-292	General Use	765.812500	795.812500
	353-356	General Use	766.212500	796.212500
	401-404	General Use	766.512500	796.512500
	453-456	General Use	766.837500	796.837500
	513-516	General Use	773.212500	803.212500
	577-580	General Use	773.612500	803.612500
	617-620	General Use	773.862500	803.862500
	665-668	General Use	774.162500	804.162500
	705-708	General Use	774.412500	804.412500
	745-748	General Use	774.662500	804.662500
	789-792	General Use	774.937500	804.937500
	877-880	General Use	775.487500	805.487500
	941-944	General Use	775.887500	805.887500
Whitman	41-44	General Use	764.262500	794.262500
	81-84	General Use	764.512500	794.512500
	121-124	General Use	764.762500	794.762500
	217-220	General Use	765.362500	795.362500
	257-260	General Use	765.612500	795.612500
	297-300	General Use	765.862500	795.862500
	357-360	General Use	766.237500	796.237500
	401-404	General Use	766.512500	796.512500
	457-460	General Use	766.862500	796.862500
	481-484	General Use	773.012500	803.012500
	537-540	General Use	773.362500	803.362500
	589-592	General Use	773.687500	803.687500
	629-632	General Use	773.937500	803.937500
	669-672	General Use	774.187500	804.187500
	753-756	General Use	774.712500	804.712500
Yakima	129-132	General Use	764.812500	794.812500
	169-172	General Use	765.062500	795.062500

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209-212	General Use	765.312500	795.312500
249-252	General Use	765.562500	795.562500
289-292	General Use	765.812500	795.812500
329-332	General Use	766.062500	796.062500
369-372	General Use	766.312500	796.312500
417-420	General Use	766.612500	796.612500
461-464	General Use	766.887500	796.887500
509-512	General Use	773.187500	803.187500
557-560	General Use	773.487500	803.487500
597-600	General Use	773.737500	803.737500
637-640	General Use	773.987500	803.987500
909-912	General Use	775.687500	805.687500